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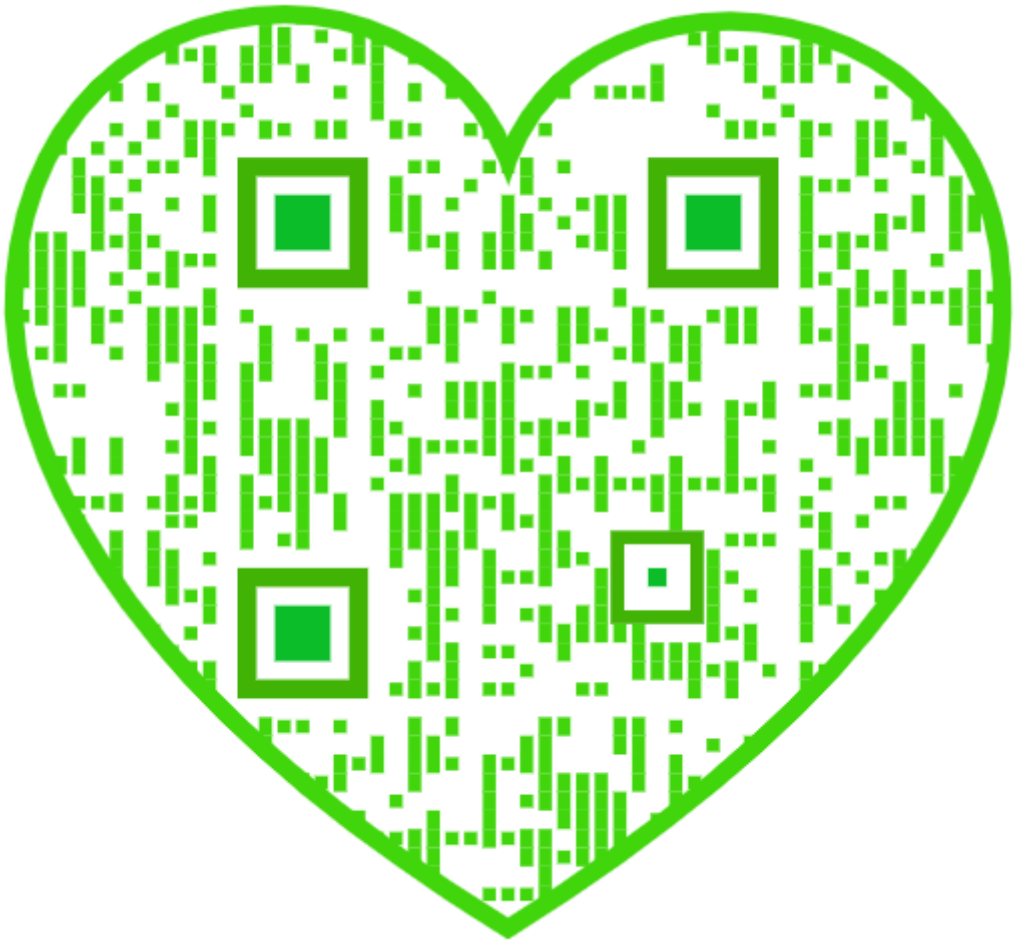

KRAMER'S

Book of Trade Secrets

FOR THE

Manufacturer and Jobber

A COMPLETE COMPILATION

OF

VALUABLE INFORMATION AND FORMULAE

For Manufacturing all kinds of Flavoring Extracts, Baking Powders, Jellies, Preserves, Maple Syrup, Soda Fountain Syrups, Temperance Beverages, Coffee Mixing, Ciders, Mustards, Catsups of all kinds, Vinegar, etc., etc., for the Manufacturer, Jobber and Retail Dealer.

BY

ADOLPH KRAMER

ANALYTICAL CHEMIST

Who has been Connected with Prominent Food Product Manufacturers of Germany and the United States.

PRICE, FIVE DOLLARS

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THE PUBLISHERS.

INTRODUCTION

THIS little book, "KRAMER'S BOOK OF TRADE SECRETS," will recommend itself to all who desire, in a condensed form, full information for the manufacture of Flavoring Extracts, Baking Powders, Soda Fountain Syrups, Jellies, Jams, Preserves, Vinegars, all kinds of Ciders, Maple Syrup, Egg Preserving, etc., All formulas are practical and they are put in such shape so that persons of limited education can use them. In fact, it is a text book for the manufacturer, jobber and dealer. For lack of that information which this book contains, business men lose thousands of dollars every year.

THE PUBLISHERS.

KRAMER'S BOOK OF TRADE SECRETS

VANILLA

Vanilla Culture

THE vanilla plant is a native of Yucatan, and the Mexican plant is considered the best in the world. It is, however, cultivated all over Central America and most of the islands of the West Indies. It has been successfully introduced by the Dutch into Java and by the French into the island of Reunion (one of the Mascarene group in the Indian ocean). The entire production of Central America approximately one hundred and fifty thousand pounds per annum goes to the United States; that of Jamaica to England; of Java to Holland and Germany; and of Reunion to France. The Germans manufacture a substitute for vanilla from a species of a fir tree. The planters claim that true vanilla is absolutely harmless and that much of the poisoning which is frequently the case from eating ice cream, is traceable to the use of the artificial German product. It is supposed to be analogous to wood alcohol, which is exceedingly poisonous. I know of a few manufactures in this country who use wood alcohol in the manufacture of vanilla and I can point to one small factory that is turning out hundreds of gallons of vanilla at a cost of only thirty cents per gallon; complete formula is given in full for making it on another page, but I wouldn't be guilty of turning out such a piece of goods.

It is a curious fact that the sole use made of vanilla in England is for the manufacture of perfumes; while in the United States it is used for flavoring.

The fruit of the vanilla is a pod, externally resembling a bean pod, from six to twelve inches long and a half inch in diameter. It is a dark chocolate brown color, often nearly black, with a very strong characteristic vanilla odor. To tell whether it is ripe you must pinch it between your fingers. If it crackles it is ripe and must be picked, if left too long in the pod it become valueless. As soon as they are cut off they are thrown into boiling hot water and allowed to remain two or three minutes when they are wrapped in flannel cloths and laid in the sun until perfectly dry. They are then annointed with olive oil, still being left in the sun until they are perfectly dry, though they are frequently drawn through the fingers to keep them soft and pliable. After having gone through this treatment two or three times they are left in the sun for five weeks or until they are perfectly cured.

Materials Used in Making Vanilla Extract

A

In the bean we have the Mexican, Bourbon, South American, Tahite Vanillous or Wild California beans, sometimes called Pomponas.

B

Artificial Vanillin, Sugar, Glucose, Glycerine, Saccharine, Prune Juice, Vanilla Resin, Vanilla, Benzoin, etc., etc.

C

Angostura Tonkas.
Surinan Tonkas.
Para Tonkas.

Artificial Cumarin, the flavoring principle of Tonka beans.

Cocoa shells; Caramel or brown sugar color and other coloring matters. Cumarin natural is obtained also from deer tongue and various other sources.

All material entering into vanilla extract is cheaper now than has ever been known before. Mexican beans are the highest priced, beans split in the ends in the curing are a little cheaper. Cut beans are still cheaper. Bourbons are worth perhaps two-thirds as much as Mexican. Tahites and Vanillous are not used by honest extract makers.

Tonkas and Cumarin should never be used in making an extract labeled "Vanilla." If used in combination with vanilla and Vanillin the extract should be labeled "Vanilla and Tonka."

Artificial Vanillin is now the principle source of vanilla flavor. It was discovered about thirty years ago and was sold first for $5.50 per oz., then reduced to $5.00, at which price it remained for nearly ten years; five or six years ago it went down to $2.00 per oz. This year it has sold as low as sixty-five cents per oz., but it was adulterated with Acetanlid; a first-class grade has been sold as low as seventy-five cents per ounce in large quanity.

Angostura Tonka vary in price, sometimes reaching $2.00 to $2.50 per lb., they now can be had at 75c. to $1.00 per lb. Surinams and Paras are cheaper, but the principle source of Tonka flavor is artificial Cumarin. Cumarin was first sold for twenty-five dollars per pound, it is now worth about $4.50 per pound. You will observe a white crystal on the Mexican and Bourbon, that is a true Vanillin. During the last year this part has been adulterated, so a cheap bean has been sold for fancy stock.

Natural Vanillin is not now, and never was an article of commerce, all statements to the contrary are false.

The crystals which you will notice on the Tonka beans are natural Cumarin—it is often collected from the bottom of casks that have contained Tonkas and sold much higher that the artificial but it is not any better, perhaps not quite so uniform and satisfactory to work.

Vanillin and Cumarin therefore are the proper materials to be used in the making extracts of vanilla and Tonka. Tonka beans have almost gone out of use for extract making and are chiefly used by tobacconists. Vanilla beans are still used for the most part to meet the requirements of the food laws.

Vanilla Extract

Take:

1 oz. Artificial Vanillin, cost say..	$ .75
1 pound granulated sugar dissolved in warm water.....	.06
Dissolve the Vanillin in one pint of the finest grain Alcohol, at say..	.32
Add the syrup of sugar and color with a little caramel, say.....	.02
	$ 1.15

Add water enough to make one gallon. This is a fine vanilla extract and will give the best practical results. It would please some better if it contained two or three pints of alcohol instead of one, but this would add to the cost of the extract without really adding to its value. This is the proper thing to use for ice creams and all cold works, but for cooking, baking, and where heat is involved Tonka, that is to say Cumarin, should be employed.

Vanilla and Tonka

at 90c per gallon

1 oz. Vanillin.....	$ .75
1 oz. Cumarin.....	.30
2 lbs. Sugar.....	.12
2 pints Alcohol.....	.64
	$ 1.81

Dissolve Vanillin and Cumarin in alcohol, add sugar dissolved and water enough to make two gallon. Color with caramel, (sugar coloring).

Baker's Vanilla

Cost per gallon 80c.

1 oz. Vanillin	$ .75
2 oz. Cumarin	.60
3 oz. Benzoic Acid	.25
6 pints Alcohol	1.92
6 pints Glycerine	1.20
Caramel Color	.5
Water to make six gallon	00
	$ 4.77

This will cost 80 cents per gallon, the six pints of glycerine could be replaced with six pounds of sugar still reducing the cost. Some eight or ten years ago a New York house made vanilla by the above formula and sold it in large quantities at $12.00 per gallon. One of the largest extract houses in Chicago now make it under the name of Baker's Vanilla and sells it at prices varying from five to six dollars per gallon.

I will insert here a formula for a pure Vanilla (Bourbon beans), but will have more to say regarding Vanillin.

Pure Vanilla

Take ½lb. medium Vanilla Bourbons at say $5.00 per lb.	$ 2.50
½ gallon alcohol	1.25
1 lb. sugar	.06
	$ 3.81

Cut the vanilla beans very *fine* and put into any suitable bottle or other receptacle that can be corked or covered, pour on one-half gallon water, let stand a few hours; then add alcohol and let stand at least ten days with frequent shaking or stirring, then filter and add sugar in form of syrup after filtering.

It would be better to keep this a month, still better to keep it a year, before filtering, but don't throw away the bean; put it into some convenient receptacle and let it stand and macerate, keeping it covered with alcohol and water, at least 25 per cent alcohol, or put it into a percolator and don't throw it away until exhausted, that is, until it will yield no more color or flavor. This extract will cost $3.81 per gallon.

An extract in which much vanilla bean is used should contain 50 per cent alcohol. Less than that will not properly dissolve the resin and in the vanilla more than 50 per cent is unnecessary. An extract containing one-half pound vanilla to the gallon will be a pretty good color. Tahites, vanillins, cocoa shells and prune juice are used to give color and body in the food law states, especially in Michigan where it is contrary to law to color vanilla; but I would advise you to avoid them altogether if possible as they add to the cost of your extract without adding anything to its value.

I would advise you in labeling your extracts to draw the line sharply between pure vanilla or vanilla with vanillin, which is a true vanilla flavor,—and extracts which contain Tonka or Cumarin —such extracts are all right, but they should be sold under their true names, food law or no food law.

Rose, orange and all other extracts made from the pure oils need nothing special on the label, but the artificial extracts must be labeled "artificial" in the food law states, and if colored must be labeled "colored." Their sale is prohibited in Michigan.

I could show you a bottle of extract labeled vanilla and Tonka, made by one of the largest wholesale grocers in Chicago. It contains no vanilla and no Tonka. It is made from Cumarin without even the addition of anything more than a trace of vanillin, and is colored but not so labeled, and this in a pure food law state. Of course they make big money by doing this though if they do pay one or two fines.

One of the largest extract houses in Chicago make an extract of which they sell from 50 to 100 gallons per week, thus:

8 oz. Cumarin	$ 2.00
40 lbs. Sugar	2.00
5 gallons Alcohol	12.50
1 gallon Caramel	1.00
Water to make 40 gallons	0.00

This extract will cost you forty-four cents per gallon. The price could be reduced considerable lower than the above by using only four gallons of alcohol instead of five gallons, or you might put

in two ounces vanillin in with the above five gallons of alcohol formula and still keep the price under fifty cents per gallon. This would make a much finer extract and would be O. K. for baking and cold work. This Chicago firm sells it all the way from $2.00 to $3.00 per gallon, owing to quantity. They label it "Vanilla and Tonka, Colored." It should really be labeled "Vanillin and Cumarin, Colored" in a food law state.

A 30 Cent Per Gallon Vanilla

To make a thirty cent per gallon vanilla, take

¼ oz. Cumarin	.10
1 lb. Sugar	.06
9 oz. Columbian Spirit (refined wood alcohol)	.12
1 oz. Caramel	.01
10 drops tincture artificial musk or civetol	.01
Water to make one gallon.	

This needs no treatment but to dissolve the Cumarin in the alcohol, dissolve the sugar and caramel in the water and mix all together.

A certain Iowa house are putting out a good many gallons per week of this grade and are making $3,000 per year off this vanilla alone. Wood alcohol is an absolute poison and in using it in large quantity it would destroy the optic nerve and produce blindness. Don't be guilty in putting out such a piece of goods and you will keep out of trouble, but if you want something better try the following:

Vanilla at 39 Cents Per Gallon.

Take:

¼ oz. of Cumarin	.10
12 oz. Grain Alcohol	.22
1 lb. Sugar	.06
Caramel	.01

This makes a vanilla which will cost thirty-nine cents per gallon. To make it a little better you may add ⅛ ounce vanillin, 10 cents, making it cost forty-nine cents per gallon. This will make a very satisfactory article. To make it still better use ¼ ounce vanillin making it sixty-one cents, or ⅜ ounce vanillin making it seventy-two cents. The fifty cent article is alright and you ought to get $2.00 to $3.00 for it. The seventy-two cent goods ought to bring more money.

True Vanilla.

The above contains Cumarin which is the flavoring principle of Tonka. To make a true vanilla flavor from Vanillin use:

1 oz. Vanillin	$ .75
1 pt. Alcohol	.35
1 oz. Caramel	.01
Add water to make 1 gallon	.00

This would cost $1.10 per gallon and you find this No. 1 for ice cream or any cold work and you can't get anything better. To make it more expensive and so as to take the fancy of one who thinks he is an expert in flavors, use one pint of tincture of Vanilla Bean to the gallon cost say 50 cents a pint, but for all practical use it does not increase its value very much. Or you may use two pints or three pints if you like. If you want to make a vanilla without artificial color use still more, say one-half gallon or 50 per cent of vanilla tincture from bean.

Vanilla and Vanillin Extract

Take 1 oz. Vanillin	$ .75
1 pt. alcochol	.35
1 lb. Sugar	.06
1 oz. Caramel	.01
Water to make 1 gallon	.00

Then add tincture of vanilla enough to raise the cost to $1.50, $1.75 or $2.00 per gallon and you will have a *true vanilla* for ice cream and cold work equal the finest in the market. This is extra fine and ought to sell for five or six dollars per gallon.

A $2.00 Vanilla Extract

Take 1 oz. vanillin say	$ .75
1 pt. alcohol	.35
1 pt. sugar	.06
1 pt. good tincture or first infusion of vanilla bean, color with Caramel	.69

In the above you will have as good vanilla for any practical purpose as any-

thing in the market. For sweetening some manufactures use Saccharine, now sold under the name of Garantose. Saccharine has been advertised as being 550 times as sweet as sugar. It was sold as high as $20.00 a pound, but it has been condemned by the Russian government and some other European governments as antiseptic and therefore unfit for food. It costs now about twenty-five cents per ounce or $3.50 per pound.

Before I forget I desire to speak about vanillons. Vanillons has no flavor and is used by some manufacturers to give color, body, vanilla resin, etc., but would not advise its use.

Tincture of Vanilla

The rule for Tincture of Vanilla or first infusion vanilla bean is three-fourth pounds to one gallon of fifty per cent alcohol—cut up beans, pour on water one-half gallon, and let stand a few hours, then add alcohol one-half gallon, when it has stood say ten days, with occasional shaking, filter, add water to make full gallon—put weaker alcohol on exhausted beans for the second infusion, say one pint alcohol to two pints water. If you use an expensive bean use only one-half pound; if a cheap bean, one pound to the gallon. You must keep your old bean as long as it yields any flavor or color. You need not throw it away for two years.

Vanilla Extract at 66c

2 oz. Vanillin	$ 1.50
2 oz. Cumarin	.60
1 gal. Alcohol	2.50
3 quarts Syrup	.15
4 oz. Caramel	.05
Water to make five gallons	.00

This will make a good cheap extract and will give good satisfaction, it could be improved by adding at least two ounces of Benzoic Acid, but in pure food law states you would perhaps be compelled to put the Benzoic Acid on the label.

Fancy Vanilla Extract at $3.11

Take:

1 lb. Bourbon cuts	$ 3.60
2 lbs Gran. Sugar	.12
1 gal. Alcohol	2.50
1 gal. Water	.00

Cut up the beans in a chopping bowl, some use a sausage grinder, pour on water first, then after a few hours, not more than twenty-four hours at longest, pour on alcohol, let stand, with occasional stirring, for at least four or five days, filter off, then add sugar in the form of a nice clear white syrup, add water enough to make at least two gallons, costing $3.11 per gallon.

The above will make an absolutely pure vanilla Or you may add water enough to make two and one-half gallons and one ounce of vanillin—then if color is too light add a little artificial brown color (not caramel) You will have a *fancy vanilla* the same which is being put out by a large Chicago extract house, the cost would be about $2.75 per gallon. This grade would sell easily for $7.00 or $8.00 per gallon.

The following formula, which will cost $1.92 per gallon, will give better satisfaction.

Take:

1 oz Vanillin	$ .75
1 pint Alcohol	.35
1 pint first infusion of cheap Vanilla Bean	.50
¾ to 1 oz. Caramel	.01
1 pt. second infusion Vanilla Bean	.25
Water to make 1 gal.	.00

You might leave out the second infusion, making the cost $1.67, or you could put in water enough, using a little more syrup also, to make one and one-fourth gallons, costing $1.51 per gallon, and still have a vanilla that, for practical flavoring purposes, would be equal to the formula which cost $3.11.

Or you might leave out the vanilla beans altogether, making your extract thus:

1 oz. Vanillin	$ .75
1 pt. Alcohol	.35
1 pt. Syrup	.06
Water to make one gallon	.00

This formula would cost $1.16 per gallon and still you will have a vanilla better than most of the pure vanillas in the market, one that will give splendid results in ice cream and all cold work (but for hot work remember that Cumarin is necessary).

A 60c Vanilla Extract

Take:

2 oz. Vanillin	$ 1.50
1 oz. Cumarin	.30
1 gal. Syrup of Sugar, white	.50
1 gal. Alcohol	2.50

Add water enough to make eight gallons. Color with caramel.

This will cost 60c per gallon and will make a good standard extract. If vanilla is not strong enough add a little more cumarin.

Extract of Vanilla Cost $4.25

Take:

2½ lbs. Bourbon beans at $6.00 per lb.
2½ lbs. Gran. Sugar.
2½ gals. Colonge Spirits, 188 per cent.
2½ gals. Water.

Proceed same as formula for Extract of Vanilla to cost $3.11 per gallon.

Vanilla and Tonka

8 oz. Tonka beans.

Marc left from above formula which cost $4.25 per gallon.

1½ gals. hot water.
1 pt. simple syrup.
3 qts. alcohol.
1 oz. caramel.

Cut up the Tonka beans and bruise in a mortar, pour one-half gallon of boiling water on them, cork or cover up, skim off any fat that may arise, strain and set aside. Stew the marc left from above formula for half an hour with a gallon of water in a tightly closed vessel, strain when cold and add three quarts of alcohol, one pint of simple syrup, sugar, coloring and the Tonka extract. Mix well and filter.

Pure Vanilla Extract

If you want a vanilla for fancy trade and for a class of people that don't care for price, try

12 ozs. Mexican bean, cost $10.00 per pound.
1½ lbs. sugar.
80 ozs. alcohol.
48 ozs. water.

Proceed to make the same as in formula which cost $3.11. If you desire to make the extract stronger and bring the cost down you may use 8 oz. Vanilla beans and 4 oz. Tonka beans.

Be careful in using container in which you make your extract, a wine keg will no doubt do if thoroughly steamed or rinsed with hot water, but a brandy keg is better. Do not grind your beans in a mill which is being used for spices, for small quantity use a chopping bowl. Some use a sausage grinder.

LEMON

THE lemons are taken to the laboratory and each is cut lengthwise into three slices. The pulp is first removed and put into a press when it is squeezed in order to obtain the lemon juice, which is sold in its natural concentrated state to the manufacturers of citric acid. The residue of the pulp is used for animal food. The peel is put into large baskets, which are stored in a cool place for some hours, when it is ready to be pressed. Each workman holds in his left hand a medium sized sponge of superfine quality, which has been previously washed most carefully and thoroughly. Between the fingers of the same hand he has also small sponges to prevent the loss of any of the oil, which is very volatile. With the right hand the workman takes a piece of peel from the basket, which is kept in easy reach, and squeezes it against the sponge, thus forcing the oil through the pores of the rind into the sponge or sponges. When the sponge is full of essence it is squeezed into a tin lined copper bowl having a lip, which

every workman has before him. In order to make sure that the peel has yielded all the essence that can be pressed by the hand, the overseer from time to time takes the rejected by squeezing it close to a flame. (We have seen children try the same experiment with peel after having eaten their oranges.) This is hand pressed peel and is then put into brine and sold to manufacturers of candied lemons. When the tin lined copper bowl is full it is set aside for a short time to permit the impurities to settle, after which the bowl is slowly and carefully decanted and the clear essence emptied into large tin lined copper vessels. Before this is put into the various sized coppers for shipments, it is passed through filtered paper. This not only perfectly purifies it, but also gives it limpidity. The quantity and quality of essence yielded by the lemon varies according to the season. During November, December and January most of the essence is manufactured, about 1000 lemons being then required to make one and one-half pounds of essence. Lemons not fully ripe are preferred as they yield a larger quantity and more fragrant quality of essence then those most fully matured.

The principal materials to be used in making extracts of lemon are oil of lemon, ethyl alcohol, that is to say grain alcohol, which is the same thing as colonge spirits, the latter being only selected alcohol or what the distillers call the "middle run."

Those persons who make extract of lemon or claim to make it from lemons or lemon peel, do so only through ignorance or fraud. Lemons are now grown in California, but the oil lemon made there thus far is of inferior quality and unfit to make a fine extract. The finest lemons come from Messina, Italy. The best oil of lemon is also made there. It must be plain to any one who thinks on the subject that it is cheaper to import the oil from Italy than to import the lemons and make the oil here. Of course a perfect lemon flavor should contain the oil from the oil cells in the rind and some of the citric acid contained in the juice, but no such extract is made, or if made would begin to deteriorate in less then twenty-four hours.

Oil of lemon and the acid of the juice (Citric acid) are incompatible, and nature has recognized this fact by interposing a wall of pulp between the acid in the juice and the oil in the cells in the exterior of the rind or peel. Besides if lemon peel were used making extract as a great many receipt books direct, a bitter extractive matter from the pulp would destroy the fine flavor of the extract.

In all French, Italian and Spanish works on the subject lemon is called "essence of lemon" the word "essence" being equivalent in those languages to "essential oil." "Columbian spirit," or refined wood alcohol is used by many unscrupulous makers of lemon extract, but its use for such purposes is punishable by fine or imprisonment in the food law states as it is a poison particularly injurious to the sight, the continual use will cause paralysis of the optic nerve and consequently blindness. Many extracts improve with age, this is particularly true of vanilla. Some keep for an indefinite length of time rather improving than otherwise, such as Cinnamon, Clove, Rose, Nutmeg, Almond, etc. Those made from ether keep well, especially if not exposed to strong light. But lemon and all citrine flavors such as Orange, Limes, Bergomot, etc., soon begin to deteriorate with age, especially when kept in a warm place or exposed to a strong light. Oil of lemon as obtained by expression, (oil of lemon should be pressed out, never distilled) consists of two distilled oils namely: 93 per cent terpene and 7 per cent citral. One pound of genuine natural citral costs as much as sixteen pounds of oil of lemon. Citral of inferior quality is obtained from oil of lemon grass and other sources, it is also produced synthetically, but the artificial or synthetic oil of lemon is poor stuff

and is not to be recommended. The food commission in the states of Michigan, Wisconsin and Illinois have examined and analyzed many samples of extract of lemon purchased in the open market and found some of them as Burnett's to contain over eight per cent true oil of lemon in about 95 per cent ethyl or grain alcohol, others of high grade contain 4 per cent, 5 per cent, 6 per cent, etc.; others again ½ of 1 per cent, 1 per cent, 2 per cent, 2½ per cent, etc. While some contained no true oil of lemon at all and less than 20 per cent alcohol, and in some cases "Columbian spirit" or refined wood alcohol In the food law states the law requires an extract of lemon to contain 5 per cent oil of lemon in ethyl alcohol, but does not prohibit the use of some water provided it can be worked in without reducing the percentage of oil, neither do the food laws prohibit coloring extract of lemon. Before these laws came into operation the highest grade of extract were the most lightly colored and the cheaper and inferior grades colored more deeply. Some manufacturers of fine and high grade extracts use about eight fluid ounces of glycerine to a gallon of lemon extract. It is thought that this has a tendency to make the extract keep better. Cheap lemon is made by rubbing the oil in magnesia and sugar, then rocking or churning the lemon for a couple of days after it is made and lastly washing out the oil which a low percentage of alcohol fails to take up. Citral or artificial oil lemon is also substituted in whole or in part for oil of lemon, but of this I will speak of later on.

Lemon Extract

¾ pound oil Lemon (fresh, use no old oil and don't buy any old oil at any price)	$ .60
¼ oz. Terpenless oil, genuine, no artificial cetral or cetral obtained from any other source than lemon peel	.30
8 oz. Glycerine	.10
A few drops Lemon yellow dissolved in alcohol or water	.01
7 pints Alcohol 188 per cent	2.19

The terpenless oil may be omitted, and one-half or four ounces glycerine may be replaced by four ounces soft water. A great deal of talk is made about distilled water, but would not recommend you to use it unless you have a still of your own. The so-called distilled water taken from boiler condensers, etc., is poor stuff and not as good as pure rain or river water. Extract made according to the above formula needs no treatment except filtering and if you have no means of filtering you may let it stand a few days and then decant it. But then it is best to filter; the expense is trifling.

Lemon Formula, No. 2

7 oz. oil Lemon	$ .35
6 pts. Alcohol	1.88
Magnesia and Sugar	.04

Cost to make, $2.27 per gallon.

Pour the oil of lemon into a medium sized wedgewood mortar, add two or three ounces granulated sugar and ½ ounce to one ounce powdered carbonate of magnesia, or put in enough magnesia to make mixture about as thick as molasses, then rub for ¾ of an hour to one hour; this makes the oil more soluble so that more water can be used; now pour on the alcohol or put oil, etc., into large bottle or other suitable receptacle and add the alcohol. Shake and then add hot (not boiling) water and color with few drops of lemon yellow dissolved in alcohol or water. Some manufacturers use tincture of tumeric for coloring. Water enough should be added to yield one gallon extract after filteration. This will require about thirty-six onnces.

Lemon Formula, No. 3

2 oz. Oil of Lemon	$ .10
½ gal Alcohol, 188 per cent	1.25
Magnesia and Sugar	.04

Cost to make, $.139 per gallon.

Treat as in Formula, No. 2, adding hot water to make one gallon.

Lemon Formula, No. 4

1 oz. Oil of Lemon	$ .05
1 qt. Alcohol	.63
Magnesia and Sugar	.04

Cost to make 72c per gallon.

Treat as above by adding *hot water* to make one gallon. This will require to be very thoroughly rubbed in order to filter clear. This formula might be varied by using one-half ounce of oil and one-eighth ounce artificial citral, it will be easier to filter if so made.

Lemon Formula, No. 5

8 oz. Oil of Lemon	$ .40
8 oz. Water	.00

Alcohol q. s. to make one gallon.
2 drahms Tincture Tumeric.

Proceed as in Formula, No 1.

To make Tincture Tumeric:

Take:

Powdered Tumeric 4 oz.

Alcohol 1 pt.

Macerate for one week and filter.

Fine Cheap Lemon Extract

3 oz. Artificial Concentrated Lemon	$ .75
3 oz. Oil of Lemon	.15
1½ gal. Alcohol, 188 per cent	3.75
Water to make 5 gallons	.00

This will make you a lemon extract at a cost of about $1.00 per gallon, allowing for usual amount of magnesia and sugar, evaporation, etc.

This extract is soluble and you may reduce the cost to any figure you desire by simply adding water.

Lemon Extract Cost About $1.00

⅜ oz. Artificial Concentrated Lemon	$ .10
½ oz. Oil of Lemon	.03
⅓ gal. Alcohol, 188 per cent	.86
Water to make one gallon	.00

The above oils to be rubbed in magnesia and sugar as given former formulas, etc.

This gives fair satisfaction, at least I know of one large house that put out hundred of gallons under their "*high grade*" brand and charge $8.00 per gallon for it. They have no trouble in getting this price, the retail dealer never enters a complaint regarding price or uality.

Lemon Extract at 90c

3 oz. oil Lemon	$ .15
1 gal. Alcohol, 188 per cent	2.50
Water to make three gallons	.00

About one-eighth ounce or at most one-fourth ounce artificial concentrated lemon added would increase the strength and make the extract more soluble. The oils should be rubbed in magnesia and sugar and alcohol added and water last. If put into a churn (a revolving churn) with a small quantity of animal charcoal (powdered bone black) and kept in motion for about an hour a good result will be obtained on filtering. This will make a good standard lemon extract. I know of one house that is putting out large quantities of it. Some manufacturers would use more oil, say two ounces to the gallon and churn the extract in revolving churn, then they put it in separator and wash out the oil which the menstruum will not take up. This oil is then sold to bakers at about half of the price of new oil.

Lemon Extract Cost $2.50

The following formula will make a *very fine* lemon extract, is being put out by one large Chicago house at about $8.00 per gallon.

Take:

6½ oz. Oil Lemon.
⅞ gal. Alcohol, 188 per cent.
Magnesia and Sugar.

Rub oil in mortar with two tablespoonfuls of sugar and some of magnesia for twenty to thirty minutes, pour on alcohol, let stand twenty-four hours and filter. I should have said that the water should be added gradually and if quite warm or even hot, but not boiling, all the better, you had better add twenty ounces of water to allow for what is absorbed by the filter paper and lost by evaporation. About one *fluid* drahm of lemon yellow color will be sufficient to color one gallon. In using color be careful or you may get in too much. The extract should be thoroughly shaken up and the magnesia and sugar distributed before you

pour extract into filter. After you have filtered this lemon and got your full gallon of extract you may wash the filter, that is to say let about a quart of clear water run through it and keep this filtrate to be used as so much water in making your cheap lemon. If you put about a tablespoonful of bone black (animal charcoal powder) into your filter it will clear it when it would not come clear without it. Six and one-half ounces to the gallon or six and four-tenths ounces would be the exact amount of oil of lemon in order to make a five per cent extract so as to pass in some food law states. About seven ounces ought to be put in as some is lost in filtration and by evaporation and in the analytical process itself.

A lemon about as good as the above for practical flavoring purposes, and better for soda fountains, may be made thus:

3¼ oz. oil Lemon	$ .15
1½ drahm true Citral from Lemon Peel	.23
5 pts. Alcohol	1.60
Magnesia, etc., about	.03

This will cost $2.00 per gallon, but this will not go into food law states where 5 per cent oil is required. All states do not require 5 per cent. Use water in the above formula as directed in other formulas.

To make a lemon to cost about $1 25 per gallon.

Take:

1 oz oil Lemon	$ .05
¼ oz. Artificial Citral or Concentrated Lemon	.07
Color about	.01
3 pts. Alcohol, 188 per cent	1.00
Magnesia, sugar, filter paper etc.	.10

Use 4 heaping tablesponsful of sugar and about 5 or 6 heaping spoonsful magnesia—rub very thoroughly in mortar, and 5½ or 5¾ pints water so that you will get off a full gallon of extract. If this is thoroughly rubbed for an hour or two it will be soluble, that is you can put it into water or add water to it without making it cloudy. To rub this oil of lemon in the manner above described an iron mortar is by far the best—a half gallon mortar can be had for 75c, gallon for $1.25. A gallon would be the best to get for then when necessary you can rub a larger quantity at a time. The weight of the jestle is sufficient—no pressure required and the iron mortar is so deep that there is no splashing over the sides, etc. The wedgewood mortar is the best for general purposes and will do for oil of lemon, (but for that, iron is the best.)

Lemon Extract to cost 60 to 65c

Take for 60c lemon ¼ oz. oil and for 65c lemon ¾ oz. oil

Thus:

¾ oz. oil Lemon	$ .05
⅛ oz. Citral	.03
1½ pt. Alcohol, 188 per cent	.50
Color	.01
Magnesia etc	.05

Treat same as the one costing $1.25 per gallon. It will be easier to make if you use only ½ oz. oil instead of ¾ oz.

A Cheap Lemon at 47c

Take:

¼ oz. Citral	$ .07
1 pt. Alcohol, 188 per cent	.34
Color	.01
Magnesia, etc	.05

Use only a little magnesia and sugar, rub well and add plenty of water to make full gallon when filtered, use mashings of your good lemon filter if you have any.

Lemon Formulas

1

Yellow peel of lemon, grated	15
Concentrated oil lemon	dr. 2½
Alcohol	pints 4
Water	pints 4

Macerate twenty-four hours and express. If necessary filter through magnesium carbonate.

2

Yellow peel of lemons	15
Citral	dr. 2
Oil lemon	oz. 2
Alcohol	pints 4
Water	pints 4

Treat as above.

3

Concentrated oil lemon	m.	24
Citral	m.	36
Oil lemon	oz.	4
Tinct. carcuma	oz.	4
Alcohol	pints	3
Water	pints	5
Magnesia carbonate	oz.	2

Shake together occasionally during twenty-four hours and filter, returning the first portions to the filter until the liquid comes through clear.

By varying the proportions of concentrated oil, natural oil and citral extracts can be made of almost any desired strength and delicacy of flavor. Citral undoubtedly enjoys some popular flavor, in just the same way that cumarin and tonka do. It serves much the same purpose in supplying a "strong" flavor at a low price. It is plainly discernible either in cooked or uncooked articles.

Orange Extract

Orange extract may be made in the same manner as directed for lemon. I think you could use a little less oil than in making lemon and perhaps a little more alcohol. Color with orange color or you may use one ounce tincture tumeric and perhaps just a trifle of caramel. A good many manufacturers use only the tincture of tumeric for coloring orange. Other extracts made from *essential oils* may be treated in a similar way except that for some of them a much less amount of oil will be necessary. In making extract of Almond, for example: One ounce to one and one-half ounces oil per gallon is quite enough and 50 per cent. alcohol will be found sufficient, or, say 50 per cent. or 60 per cent. according to the amount of oil. In making Almond use genuine oil free from prussic acid. It will cost about $5.00 to $5.50 per pound; the artificial is worth about seventy-five cents per pound.

Extract Cinnamon

8 oz. Oil Cassia
8 oz. water
Alcohol 188 per cent q. s. for one gallon.

Mix oil with seven pints alcohol; to this add the water which has previously been mixed with one-half pint alcohol. Or proceed as with lemon, using magnesia.

Extract Cinnamon

Take:

2 oz. Oil Cinnamon.
1½ gal Alcohol, 188 per cent.
2 pints Water.

Color with tincture of red saunders or use cinnamon color which is already prepared. Instead of rubbing oil and magnesia together you may use one ounce magnesia and put in filter and filter through magnesia. You may make any price of extract of cinnamon by using less quantity of oil and alcohol; also you may do the same with other extracts.

Clove Extract

2 oz. Oil Cloves.
½ gal. Alcohol, 188 per cent.
2 pints Water.

Dissolve the oil in the alcohol, add the water slowly and filter if necessary.

Extract of Rose

2 oz. Oil Rose Geranium.
Alcohol q. s. for 1 gallon.

Or

1 drahm Oil Rose.
1 drahm Oil Rose Geranium.
Alcohol q. s. for 1 gallon.
Color with tincture of Alkanet root.

Or

2 drahms Otto Rose.
1 drahm Oil Rose Geranium.
1½ gal. Alcohol, 188 per cent.
½ gal. hot water.

Dissolve the oil in the alcohol, shake well and add slowly the hot water, not boiling. Color with tincture Alkanet root or use the specially prepared color for Rose.

Extract Almond

2 oz. Oil Bitter Almond.
8 oz. Water.
Alcohol 188 per cent q. s. for 1 gallon.
Proceed as for cinnamon.

Extract Celery

8 oz. Ground Celery seed.
5 pts. Alcohol 188 per cent.
Water, q. s. to make 1 gallon.

This may be made either by taking the ground celery seed and mix together with about one ounce of Carbonate Magnesia and place in paper filter, pour on the alcohol and water over the seeds and the magnesia or you may macerate the celery with 1 pint alcohol and ½ pint of water for about 3 days and then put in percolator and mix balance of alcohol with about 2 pints of alcohol and pour upon the drug, when percolating is done run water through to make one gallon. If you desire to make stronger you may use more alcohol and also work in ¼ oz. ½ oz. or 1 oz. of oil of celery.

ARTIFICIAL EXTRACTS

BY artificial extracts it is understood those that are not made directly from the fruits, but from ether, etc. You can make orange and lemon artificially, but I consider them very poor in comparison to those made from the natural flavors.

In point of fact nearly all the flavors, all the odors and all the colors are now made artificially and can probably all be produced from the same material, that is to say from crude petroleum. It is a curious fact that in the cold measures there are stored up all the products of many centuries of sunshine and vegetable life and growth, all the heat of centuries of sunshine, all the colors of the sunlight. all the flavors of all the fruits and all the odors of all the flowers and that that most wonderful of magicians, the modern chemist is able to reproduce them all from crude petroleum.

There has been a great demand for artificial extracts heretofore, but it seems to be rather less now. Their sale is prohibited in the state of Michigan, which is probably unwise, for they are not injurious, although in my opinion they are not very great value.

Extract of Pineapple

1 part Chloroform.
1 part Aldehyde.
5 parts Butyric Ether.
10 parts Amyl Butyric Ether.
3 parts Glycerine.

These 20 parts will give you 20 oz., which you may call Oil of Pineapple.

Make as follows:

10 oz. Pineapple.
10 oz. Tincture of Orris Root.
4 pints Alcohol.
1 pint Syrup.
Water to make 1 gallon.
Color light yellow and filter.

You may make a stronger extract by using 15 to 20 oz. each of the oil of Pineapple and tincture of Orris root; in that case you have to use 5 pints alcohol to the gallon. Use tincture of Orris root in the same way with Raspberry and Strawberry.

Extract of Banana

6 oz. of Aceate Amyl.
2 oz of Butyrate Amyl.
16 oz. Glycerine.

Alcohol, 188 per cent, to make one gallon.

Mix and color with Tincture Tumeric, 1 drahms.

Banana Extract

To make banana oil use equal parts of amyle acetate and butyric ether. Use two ounces glycerine and one drahm tincture of tumeric, alcohol to make one gallon. Mix thoroughly and filter through one-half ounce carbonate magnesia.

Extract Strawberry

Nitrous Ether	1 part
Acetic Ether	5 parts
Formic Ether	1 part
Butyric Ether	5 parts
Methyl Salycitic Ether	1 part
Amyl Acetic Ether	3 parts
Amyl Butyric Ether	2 parts
Glycerine	2 parts

These parts thoroughly mixed together will give you the oil of strawberry. Now take

16 oz. Oil of Strawberry.
16 oz. Tincture of Orris Root.
16 oz. Syrup.

4 pints Alcohol with water to make one gallon. Color red. To make a cheaper extract use less oil of strawberry and less alcohol, but the same quantity of tincture orris root, etc.

Coloring for Extracts

Dealers in extract material handle all kinds of colors, yellow, green, etc., and they are extensively used by manufacturers of extracts, perfumery, etc. They take the place of turmeric and other colorings.

Extract of Raspberry

Take:

Nitrous Ether.....1 part
Aldehyde.....1 part
Acetic Ether.....5 parts
Formic Ether.....1 part
Butyric Ether.....1 part
Benzoic Ether.....1 part
Oenauthic Ether.....1 part
Sebacic Ether.....1 part
Methyl Salycilic Ether.....1 part
Amyl Acetic Ether.....1 part
Amyl Butyric Ether.....1 part
A saturated solution of Tartaric Acid in cold Alcohol, 188 per cent.....5 parts
Same of Succinic Acid.....1 part
Glycerine.....4 parts

This makes what is called the *oil of strawberry* and the parts may be taken in drams, ounces or pounds. This is diluted with alcohol and water, sweetened, colored, and generally have tincture of orris root added to them. Raspberry may be improved by adding a small percentage of tincture of Ionone. Mix well and filter through one-half ounce of carbonate magnesia.

Extract of Apple

Glycerine.....4 parts
Chloroform.....1 part
Nitric Ether.....1 part
Aldehyde.....2 parts
Acetate of Ether.....1 part
Valerianate of Amyl.....10 parts
Oxalic Acid.....1 part

(The oxalic acid be saturated in solution of cold alcohol.)

This will make *oil of apple.*

Alcohol to make one gallon, or use less of the oil and alcohol and put in water. Mix well and filter through half an ounce of carbonate magnesia. Color yellow with tumeric.

Extract of Cherry

Glycerine.....3 parts
Aceate of Ethyl.....5 parts
Benzoate of Ethyl.....5 parts
Oenanthylate of Ethyl.....1 part
Benzoic Acid.....1 part

(The benzoic acid should be saturated in cold alcohol.)

This makes *oil of cherry.*

Proceed as in some of the other formulas.

Extract of Pear

Aceate Ether.....5 parts
Amyl Aceate Ether.....2 parts
Glycerine.....2 parts

Supposing the parts to be ounces, the nine ounces should make about one gallon extract by the addition of alcohol and water in equal parts, of course you can make it stronger by using more alcohol or you can make it weaker. Filter through about one-half ounce of magnesia.

Extract of Pear

Glycerine.....10 parts
Aceate of Ethyl.....5 parts
Aceate of Amyl.....10 parts
Alcohol.....100 parts

Parts may be taken in drahms or ounces. This makes *oil of pear.*

Extract of Apricot

Glycerine.....4 parts
Chloroform.....1 part
Butyrate of Ethyl.....10 parts
Valerinate of Ethyl.....5 parts
Onathylate of Ethyl.....1 part
Salicylate of Methyl.....2 parts
Butyrate of Amyl.....1 part
Oxalic Acid.....1 part

(Oxalic acid should be saturated in solution of cold alcohol.) Mix well and this will make the *oil of apricot.* Proceed as directed in other formulas.

Extract of Peach

Glycerine.....5 parts
Aldehyde.....2 parts

Acetate of Ethyl.....5 parts
Formiate of Ethyl.....5 parts
Butyrate of Ethyl.....5 parts
Valerinate of Ethyl.....5 parts
Oenanthylate of Ethyl.....5 parts
Sebacic Ether.....1 part
Salicylate of Methyl.....2 parts

This makes *Oil of Peach.* Proceed as directed in other formulas.

Extract of Plum

Glycerine.....8 parts
Aldehyde.....5 parts
Acetate of Ethyl.....5 parts
Formiate of Ethyl.....1 part
Butyrate of Ethyl.....2 parts
Oenanthylate of Ethyl.....4 parts

This makes *Oil of Plum.* Proceed as directed in former formulas.

Extract of Black Cherry

Acetate of Ethyl.....10 parts
Benzoate of Ethyl.....5 parts
Oenanthylate of Ethyl.....2 parts
Oxalic Acid.....1 part
Benzoic Acid.....1 part

(The Oxolic acid and Benzoic acid should be made in solution of cold alcohol.) This makes *Oil of Black Cherry.* Proceed as directed in other formulas.

Extract of Grape

Glycerine.....10 parts
Chloroform.....2 parts
Aldehyde.....2 parts
Formiate of Ethyl.....2 parts
Oenanthylate of Ethyl.....10 parts
Salicylate of Methyl.....1 part
Tartaric Acid.....5 parts
Succinic Acid.....5 parts

(The Tartaric acid and Succinic acid should be saturated in solution cold alcohol.)

This makes *oil of grape.* Proceed as directed in former formula.

Extract Gooseberry

Aldehyde.....1 part
Acetate of Ethyl.....5 parts
Benzoate of Ethyl.....1 part
Oenanthylate of Ethyl.....1 part
Tartaric Acid.....5 parts
Succinic Acid.....1 part
Benzoic Acid.....1 part

(The last three acids should be saturated in solution of cold alcohol).

This makes *oil of gooseberry.*

Proceed as directed in former formula.

Extract of Melon

Glycerine.....3 parts
Aldehyde.....2 parts
Formicate of Ethyl.....1 part
Butyrate of Ethyl.....4 parts
Valerianate of Ethyl.....5 parts
Sebaic Acid.....10 parts

This makes *oil of Melon.*

Proceed as directed in former formula.

Extract of Pineapple

¼ lb. Acetic Acid.
2 oz. Oil of Orange.
3 lbs. Butyric Ether.
⅛ oz. Oil of Cognac.
1 gal. Tincture of Orris Root

Dilute with alcohol and water, and color yellow.

Orange Extract

If you want to make a medium quality of orange extract rub two ounces oil of orange in magnesia and sugar and add one-half gallon alcohol, then add one-half gallon warm water, gradually shaking, let stand over night, color and filter. To make still cheaper, use less oil, say one-half ounce, three-fourths or one ounce to a gallon and two or three pints of alcohol. Remember oil of orange and lemon must be thoroughly rubbed in magnesia and sugar, when the quantity is small put a little of the alcohol into the mortar while rubbing.

Extract of Wintergreen

8 oz. Oil of Wintergreen (true or artificial oil).
½ dr. Wintergreen herb.
8 oz. Water.
Alcohol, 188 per cent of q. s. for 1 gallon.

Mix and let stand for twenty-four hours and filter.

Peppermint Extract

1 oz. Oil of Peppermint.
2 pts. Alcohol, 188 per cent
1 pt. Water.

Filter with carbonate magnesia and color with Chlorophyll.

Peppermint

1 oz. Oil of Peppermint (Mitcham).
1 pt. Alcohol.

Mix by agitation.

This is the usual strength as sold in shops, but the new Br. Ph. gives it to make it very nearly double the strength, as follows: With 1 oz. oil use 9 oz. rectified spirit.

Lemon Extract

(Soluble.)

5 oz. Oil of Lemon.
2 pts. Alcohol, 188 per cent.
6 pts. Water.
2 oz. Carbonate Magnesia.

Tincture of Tumeric to color. Rub the oil and magnesia in mortar, pour in alcohol slowly and set aside for two days and then add the water, a little at a time and shake well and let stand for a week or ten days and then filter and add color. You can make Orange soluble in same way but make color darker by using small amount of Caramel, (burnt sugar.) The cheap extracts of cloves, peppermint, cinnamon, etc., are made as given in formulae for lemon extract, soluble.

Soluble Lemon

1 oz. Oil Lemon.
10 oz. Alcohol, 188 per cent.
9 oz. Water.
Magnesia, q. s.

Combine oil and alcohol and let stand 48 hours and add magnesia. Heat water 100 degrees (not over) turn very slowly into the first mixture, stirring well, filter.

FRUIT JUICES

I GIVE instructions by which all confectioners may extract and preserve their own fruit essences, and so guard their health and add to the pleasure of all for whom they provide.

Among the juicy fruits are strawberries, raspberries, blackberrries, cherries and currants. Among non-juicy fruits are apples, pears, peaches, quinces, apricots and plums.

Mash the juicy fruits in a basin to a pulp. Place on the fire and make scalding hot. Now pour into a hair sieve and allow the juice to strain through. Put into bottles and securely tie down. Place the bottles in a caldron of cold water and boil for twenty minutes. Remove from the fire and allow to remain in the caldron until cold. Then set away for use.

In the case of non-juicy fruits, such as apples, pears, peaches, etc., put the fruit into a basin, cover with water and boil to a pulp. Now place on hair sieve and allow to drain without any pressing. Observe now that it is only the liquor which passes through the sieve without pressing which is to be used for flavoring purposes. What remains in the form of pulp is not adapted for these uses. Now put the juice as obtained as above into bottles and proceed to treat as already laid down for the juicy fruits. The foregoing processes are to be gone through with in the case where extracts are to be kept transparent and clear, as for syrups, cordials and beverages.

In case where the flavorings are to be used for any purpose where transparency or clearness is desirable, such as for ice creams, fruit ices or bonbons, then I would use not only the clear fluid, but the pulp of the fruit also. I would for these opaque purposes save and utilize everything of the fruit except the skins and seeds. This pulp is to be treated as already laid down.

As thus obtained and preserved our confectioners can supply themselves with a quantity of perfectly pure extracts of all their favorite fruits, and which can always be at hand, for flavoring every description of pastry, cakes, pies, tarts, puddings, creams, ices and beverages at any season of the year. Especially when there is any one in the house who is sick or feverish, cordials may be flavored with these delightful

sub-acids—these remedies and restoratives of kind mother nature herself—such as will shoot through all the veins of the most debilitated and infirm, the most delicious sensation of happiness and hopes.—*James W. Parkinson, in Confectioners' Journal.*

FORMULAS

For Preparing Ciders, Butters, Jellies, Mustards, Catsup, Etc.

Formula for Preparing Condensed Cider

1 gallon of Compound Cider acid.
½ pint of coloring solution.
2 pints of double concentrated cider.
2 pints of Garantose.
2 quarts of solution of Benzoate of soda.

2 or 3 gallons of boiled cider, added to the above, will be a great improvement.

Simply mix by adding forty-eight gallons of water, and in adding the water, see that it is thoroughly mixed, and you will have one of the best ciders on the market. Or you can sell the cider in concentrated form, when shipping it a long distance. Or preparing it for home trade as artificial cider, simply add water.

Whiskey kegs or barrels are the best packages for shipment or storing this cider. If you use new packages, be sure and have them parafined.

Instructions to Make Compound Cider Acid

5 lbs. of Citric Acid (crystals).
5 lbs. of Tartaric Acid (powdered).
1 pint of 80 per cent pure Acetic Acid.
1 pint of Phosphoric Acid—Syrup U. S. P.

Place all the acids together in a six gallon stone jar, and fill with boiling hot water, stirring until all is thoroughly dissolved; keep it in a cool place and see that it is tightly covered.

Directions for Preparing Double Concentrated Cider

1 pound of soluble Fruit Oil.
8 pounds of Alcohol (188 per cent proof).
16 oz. of Water.

First mix the oil and alcohol, then slowly add the water—thoroughly mix, if possible, by shaking. The above formula applies to all but the orange, which should be

1 lb. of Oil of Orange.
8 lb. Alcohol (188 per cent proof).
6 parts of Water.
Mix same as above.

Directions for Preparing Garantose

Take one (1) pound of Garantose and place it into one-gallon glass bottle, adding warm water, shaking it thoroughly and use according to formula.

Directions for Preparing Benzoate of Soda Solution

Take (1) pound of Benzoate of Soda and place it into a one gallon glass bottle and partly fill with warm water, and shake it up until all is dissolved, then fill the bottle with water and again thoroughly shake. Always shake the bottle before using and keep it well corked.

Use the following prepared colorings for different kind of Ciders.

Caramel or Sugar Coloring For Apple Cider

Orange coloring for Orange Cider.
Cherry coloring for Cherry Cider.
Caramel or Currant for Blackberry Cider.
Currant coloring for Grape Cider.

These colorings are the cheapest, best and purest. Be certain to prepare them as instructed and use according to formula. (For any of the above ingredients entering into the formulas write for prices to Kelso & Co., Manufacturers and

Importers, 209-211 S. Clinton St., Chicago, Ill. They are responsible).

Should you desire to have a heavy body to the artificial ciders use the following: Simply add 3 or 4 gallons of Gum-Tragacanth.

Directions For Preparing Gum-Tragacanth

Take five pounds of Gum-Tragacanth and put it in a 45 gallon barrel and fill up with warm water, stirring same 3 or 4 times daily until all is dissolved—it may take a week or ten days to thoroughly dissolve, and when it is all dissolved add one (1) pound of Benzoate of Soda thoroughly dissolved in one gallon of hot water.

Directions for Preparing Sugar Coloring

Disolve one (1) pound of dry coloring in two (2) gallons of hot water, thoroughly stirring; be sure that it is thoroughly dissolved, then let same boil for about a minute or less, when it is ready for use. (Kelso & Co. Importers, 209, 211 S. Clinton, Chicago, Illinois, will supply you with all colors.)

Formula for Peach Butter

Use peaches unfit for preserving, removing the stones, to those you may add the peelings of good peaches; add enough water to boil; and boil to a fine pulp, then run through a pulper with No. 1 seive—to each 100 lbs. of pulp add 25 lbs. of yellow sugar and ¼ oz. extract of peach, then boil a little over four hours. Then add for each 100 lbs. 4 oz. of Benzoate of Soda, dissolve well with hot butter and added, then let boil once more. Fill in pails or jars, but do not cover until quite cool—stir well while boiling.

Formula for Plum Butter

Use plums unfit for preserving—boil well with sufficient water to prevent burning. When well cooked run through pulper, using No. 3 sieve. To each 100 pounds of pulp, add twenty-five pounds yellow sugar, ¼ oz. of finely powdered cloves, and ½ oz. aniline coloring, then boil for six hours. Add three ounces of benzoate of soda for each 100 pounds, dissolved in hot pulp and add to the rest. Stir well while boiling.

Formula for Apple Butter

Slice apples, add sufficient water to prevent burning, and increase water until all are cooked, to a fine pulp; take clean cloth and strain off all the juice, then replace pulp in kettle, and to every 100 pounds of pulp, add 20 lbs. of brown sugar and one (1) ounce finely powdered Saigon Cassia. Boil for 7 or 8 hours then put in jars, and add for each 100 pounds two (2) ounces of Benzoate of Soda, thoroughly dissolved in hot water, then put into kettle and boil once more, then fill into pails, kegs or barrels.

Boil (with stirrer) from 8 to 10 hours with kettle covered, steam will escape through the opening for stirrer. When butter is finished run it through the pulp machine. Properly cooked apple butter will keep without any preservative.

Formula for Quince Butter

Cut in slices and boil with plenty of water to a fine pulp, run through pulper then replace in kettle and for every 100 pounds of pulp add 25 lbs. of yellow sugar and boil for six hours slowly, add after dissolving in hot water, ¼ ounce extract of Quince to each 100 pounds and 4 ounces of Benzoate of Soda. If packed in pails, put a sheet of wax paper over each.

If butter is made in large quantities, store in empty glucose barrels in cool cellar. When kept in pails for a long time use solution of Benzoate of Soda. Spread very lightly over the top.

To prevent leakage, parafine the pails,

but in that case put the butter in after cooling.

For Making Cheap Jelly

Take two barrels of apple waste, put in tank with water sufficient to boil with open steam. When cooked to a pulp, run through a press while hot, and extract all the juice possible, then boil juice down to 16 per cent syrup scale, and add as much glucose as juice, color to suit with aniline, and flavor to suit with extract—then boil once more.

Dissolve 5 pounds Citric acid, and 5 pounds Tartaric acid in 5 gallons of hot water, mix well, then put the mixed acid in the bottom of each pail, in the following quantities.

For a 30 lb. pail.....4 oz.
For a 20 lb. pail.....3 oz.
For a 10 lb. pail.....2 oz.
For a 5 lb. pail.....1 oz.

Run hot jelly into pails and skim off the foam, before it gets cool. Jelly will harden in a very short time.

Formula for Jelly from Apple Juice

Boil 50 gallons of juice down to 18 per cent syrup scale, then add 80 lbs. of glucose, 20 lbs, of white sugar, and 8 oz. of jelly acid. If you make strawberry add 2 ounces of extract of strawberry and one ounce of aniline coloring, watch closely when boiling, and when jelly begins to string off the perforation, shut off steam—add flavoring and acid when jelly is nearly done.

The acid is made by dissolving 10 lbs. of Tartaric acid and 10 lbs. of Citric acid in four gallons of boiling water.

The aniline is made by dissolving ½ lb. of aniline in one quart of alcohol—when dark color is wanted, add more coloring. For blackberry jelly, use a few ounces of sugar coloring. For apple and pear jelly use no coloring; for pineapple, quinces, and peach use no coloring. Use the different flavors for different jellies. When packing jelly put wax paper on top, and if kept long time, add a very light layer of preserving solution. *Never leave apple juice over night, it will sour.*

Formula for Preserves

100 pounds preserved fruits (see formula.)
12 gals. of Juice.
60 lbs. Glucose.
40 lbs. of Granulated White Sugar.

Place the above in kettle and boil, use perforation, keeping it stirring all the time—after cooking for 30 to 45 minutes, add 8 ounces of jelly acid, stir in well and shut off steam. Fill into pails or glasses while hot. After standing for a time, and before it hardens, stir it, as fruit will sink to the bottom. If you want highly flavored goods, add 4 ounces of extract of the fruit you preserve.

Formula for Producing a fine Drinking Cider from Boiled Cider

30 gals. of Soft Water.
25 lbs. of Granulated Sugar.
¾ lbs. Tartaric Acid.
2 gals. Heavy Boiled Cider.

Dissolve the sugar in the water, then add the boiled cider and acid—agitate well, and after coloring to suit your taste, allow the mixture to settle for 10 or 20 hours, and then draw off the clear liquid from the sediment in clean casks, at a temperature of 80 or 85 it will require 3 or 4 days to produce effervesence—then add preservative (say 1 ounce of Benzoate of Soda, to each 10 gallons of finished goods) and it is fit for immediate use—keep it in a cool place.

The writer, of this formula, has made hundreds of barrels, in this way. when cider was scarce and *it cannot be told* generally from the pure juice.

Formula for Preserving Fruit for Preserves

For every 100 pounds of selected clean fruit, such as Raspberries, Strawberries, Huckleberries, Gooseberries, or Black-

berries add 30 pounds of granulated sugar; boil in a copper kettle for a few minutes, if not enough natural juice, add from two to four gallons of apple juice—then add for each 100 pounds of fruit with sugar, three (3) ounces of Salicylic acid, well mixed with hot juice before adding.

Pack away in 15 to 30 gallon kegs (new) and store in cool cellar until needed for preserves. Mark kegs thus:

100 pounds strawberry, 3 ounces, xxx —1816197.

Or

200 pounds of strawberry 6 ounces xxx —1816197.

In case of peaches and quinces, after cleaning and stoning peaches, cut in slices, then cover well with water and boil until soft, but not too soft. Quinces take longer to boil than peaches as they require more water. Weigh fruit before putting in the kettle, and for every 100 pounds add 30 pounds granulated sugar and three (3) ounces of Salicylic acid. Treat apples and pears in the same manner.

In the case of plums and cherries, if not enough natural juice, add apple juice sufficient to cover—boil till soft, then run through pulper No. 3 sieve, then replace in kettle, add sugar and Salicylic acid as before.

For grapes use finer seive, say No. 12, and treat same as plums and cherries.

Formula for German Mustard

180 lbs. Trieste Mustard Seed.
25 lbs. Fine Dairy Salt.
25 lbs. Brown Sugar.
½ lb. Nutmeg.
½ lb. Mace.
2 lbs. Celery Seed.
1 lb. African Cayenne.
½ lb Saigon Cassia.
6 lbs. Dark Tumeric.
120 gals. 40 grain Vinegar.

The mustard seed should be run through rollers first, then the other spices—it is better to pound the spices through a mortar before putting them through the rollers, then add the vinegar, then the salt, then the tumeric (dissolved in vinegar) and well stirred in, and last add the sugar. The first grinding should be coarse, and the second and third grinding fine. If mustard should be too thick, add more vinegar, but not to use vinegar stronger than 50 grain.

Formula for Making High Grade Wet Mustard

50 lbs. of Yellow Mustard seed, rolled.
150 lbs. Trieste seed, rolled.
180 gal. of 45 grain Vinegar.
20 gals. of Estergon.
2 lbs. Cayenne pepper powdered.
4 lbs Tumeric.
25 lbs. Salt.

Formula for French Mustard

200 lbs. Yellow Mustard seed.
30 lbs. Dairy salt.
40 lbs. Brown Sugar.
2½ lbs. African Cayenne.
1 lb. Oil of Mustard.
125 gals. of 40 grain Vinegar.
6 lbs. Dark Tumeric.
½ gal. Sugar Coloring.

The mustard seed should be run through rollers first, then the other spices, which should be previously powdered in a mortar—then add the vinegar, then the salt, then the Tumeric (dissolved in vinegar and well stirred in,) then the sugar and last the sugar coloring. If you want a bright color, add 4 ounces of *orange red* or *catsup coloring*, which should be put in with the sugar coloring. The first grinding should be coarse, and the second and third fine.

Formula for Tomato Catsup

20 gals. of Sweet Pulp.
6 lbs. of Granulated Sugar.
3 ozs. Saigon Cassia (finely powdered.)
1 oz. of African Cayenne (finely powdered.)
1 oz. Jamaica Ginger (finely powdered)
½ oz. of Nutmeg (finely powdered.)
½ oz. of Mace (finely powdered.)
1½ oz. Orange Red or Catsup coloring (see directions.)

½ gal. of 90 grain or 1 gal. of 45 grain Vinegar.
4 ozs. Benzoate of Soda.
½ oz. Oil of Cloves.

Directions for Preparing Coloring

Heat two gallons of water, and when thoroughly hot, add to same one pound of *dry catsup coloring*, stir well and allow to boil up, after which your coloring is ready for use.

Directions for Tomato Catsup

Put pulp in kettle, and when it starts to boil, mix in the spice, first dissolve in the vinegar, then dissolve the sugar in some hot pulp, and stir in, and boil catsup slowly for ¾ of an hour, then dissolve the acid in some hot catsup, and stir in, and add the oil of cloves, and to continue to boil for five minutes, and put in good clean barrels, the corks for catsup bottles must be *well steamed, or left in hot water over night.*

Improved Tomato Catsup

½ bu. Ripe Tomatoes.
2 Roots Horseradish grated.
8 oz. Salt.
¼ oz. Black Pepper.
30 grains Cayenne Pepper.
60 grains Cloves.
60 grains Allspice.
½ oz. Majorom leaves.
½ lb Molasses.
40 oz. Vinegar.

Cook the tomatoes in the vinegar till soft, allow to cool, add the other ingredients and pass through sieve. The thickness of catsup is increased by powdered Tragacanth (¼ to ½ oz.)

Formula for Concentrated Raspberry Jelly

14 lbs. White Sugar.
8 lbs. Glucose.
3½ lbs. Gelatine.
½ oz. Citric Acid.
2 qts. Water.
12 ozs. Raspberry Essence.
Carimine to Color.

Process: Soak the gelatine by covering it with cold water for two or three hours. Boil the sugar with two-thirds of the glucose and water to the degree of feather, 242 degree remove the pan from the fire; stir in the remainder of the glucose with the gelatine and acid; color rather a deep red, and add the flavor, let it remain in the pan till the scum forms the top; skim it off and run the mixture twice through a jelly bag; pour it into tins, making a sheet full inch thick; stand in a cool place till set firm, then cut it up into bars 2¼ inches long and 1⅞ inches wide.

This size is for ½ pints, other sizes in proportion. The bars are then ready for packing. They may be wrapped in wax paper or rubbed over with pulverized sugar and wrapped in plain paper, then of course, in showy labels or card boxes.

For strawberry proceed as above changing color and essence.

Formula for Apple Butter Without Apples

Take one pint of New Orleans black molasses (good molasses wont do) and one pint of 40 grain vinegar, mix well together, put it on the fire until it boils, then take off, and take 4 ounces of wheat flour and cold water enough to make a thin batter, and mix well, then pour altogether and boil until it gets thick as you want it. Add cinnamon or allspice to suit taste. This will make a splendid apple butter at a cost of about 2 cents per pound, it will be pure as far as any chemicals are concerned. Make small lots until you get it to suit your taste, and then make larger quantity.

Sweet Cider

1 gal. of Evaporated Cider.
6 gal. Soft Water.

Evaporated cider is apple juice that four fifths of the water has been driven off by evaporation and is sold at about 50 to 60 cents per gallon, it makes a pure sweet cider at very little cost.

Orange Cider

Take juice and grated rinds of twelve oranges to four gallons of sweet cider,

made as above. Use Salicylic Acid preservative.

Orange Wine

(Fermented.)

23 lbs. Lump Sugar.
12½ gals. Water.

Dissolve the sugar by boiling and skim carefully. Pour the boiling syrup on the rinds of 100 Oranges, add the juice of the fruit and allow to stand over night. Add 6 ounces of yeast, ferment for 3 days at a temperature of 65 to 70 degrees F., then strain into a barrel and bung loosely. Add 4 pints of alcohol, mix and add three ounces of Sherry Findings. Let stand four months and work off bright. Where the addition of the above amount of alcohol is objected to, 5 grains Salicylic Acid should be added to each pint of wine. The Salicylic Acid should previously be dissolved in a small quanity of alcohol.

Orange Wine

(Unfermented.)

1 dram Oil of Orange.
8 oz. Tincture of Orange Peel.
4 oz. Alcohol, 188 per cent proof.
8 oz. Tartaric Acid.
3 drams Salicylic Acid.
6 lbs. Lump Sugar.
3 ozs. Caramel.
10 gals. Water.

Dissolve the Oil of Orange in alcohol and pour upon sugar contained in a large funnel. Pass through this a sufficiency of the water to dissolve, add the rest of the water containing the Tartaric Acid, then the Caramel and finally the Tincture of Orange in which the Salicylic Acid has been previously dissolved, add 2 ounces Sherry Findings (see formula above) mix well and add ½ gallon alcohol. Set aside for two weeks and work off clear.

Ginger Wine

18 lbs. of Lump Sugar.
7½ gals Water.
Rinds of seven Lemons.
Rinds of four Oranges.
½ lb. Bruised Jam. Ginger rough g'rd.
¼ lb. Raisins, cut.

Boil the ginger, raisins, lemon and orange rinds and sugar in the water for an hour. Skim and pour into a clean 10 gallon keg. Next day add the juice of the lemon and oranges and 4 ounces Sherry Findings (see above formula). Strain and add two tablespoonsful of yeast. Ferment for three days and bung up the keg. Let stand for six weeks, rack off the bright contents into another keg, add a pint of alcohol and let stand one month and bottle. Use good fruit and best Jamaica ginger:—*Pharmaceutical Formulas C. & D. London Modified.* In the three preceeding formulas for wines, the gallons must be 128 ounces (American measure.)

Flavoring Extracts

(Powdered.)

15 ozs. Oil of Lemon.
1 oz Citral.

Spray as much as required on carbonate of magnesia, then incorporate the carbonate of magnesia with powdered corn starch or sugar of milk, or the oil may be sprayed on the sugar of milk direct, be careful to dry at a low temperature.

Almond: Use oil of bitter almond free from prussic acid, spray the same as before.

Raspberry and strawberry use the pure fruit juice concentrated, spray on powdered sugar.

Spices

If you desire to adulterate your spices any, the following will perhaps do you lots of good.

Cinnamon Mixture

5 lbs. Raw Sienna, dry.
½ lb. pow'd Charcoal.
50 lbs. Meal (Pearl).
50 lbs. Corn Flour.
Mix.

Pepper Mixture

3½ lbs. Powdered Charcoal.
14 lbs. Yellow Ochre, dry.
50 lbs. Meal (Pearl).
50 lbs. Corn Flour,
Mix.

Ginger Mixture

25 lbs Yellow Ochre.
½ lb. pow'd Charcoal.
½ lb. Princes Mineral.
50 lbs Meal, (Pearl).
50 lbs. Corn Flour.
Mix.

The above are for increasing your spice stock.

Hop Ale

Of the best quality is made direct from hops exactly in the same manner as ordinary bitter ale, with a malt and sugar mort adjusted so that the fermented liquor may not contain more than the non-excisable percentage of proof spirit. Considerable skill is required in making this beer. The quanity of hop used is 1 pound to 12 gallons of boiling water. After standing for three hours in covered vessel the infusion is strained through a twill bag, and in it are dissolved 7 pounds of sugar and 1 pound of malt extract, then being made up to 12 gallons with water and when the temperature reaches 70 degrees F., 1 ounce compressed yeast is added. Ferment eight hours, strain, add 1 ounce of bisulphate of lime solution and a handful of isinglass findings; then rack for three days and bottle. Another formula is.

5 lbs of Demeraga Sugar.
1½ drams Saccharin.
1½ ozs. Hop Ale essence,
½ oz. Ginger Ale essence
½ oz. Caramel.
8 gals. Boiling Water.
5 ozs. Brewer's Yeast.

Dissolve the caramel and sugar in the water, and when the temperature is reduced to 70 degrees F. add the yeast and at the end of 6 hours the essence in which the saccharine has been dissolved. The above are imperial measure.—*Pharmaceutical formulas.*

Hop Ale Essence

3 ozs. Tincture of Chiretta.
4 ozs. Tincture of Hops.
½ dram Essence of Pineapple.

From one to two drams of this essence is to be added to each gallon of brew.

Essence of Smoke

2 ozs. Rect. Spirit of Tar.
4 ozs. Alcohol.

Mix and add to crude pyroligneous acid, 20 ounces shake and filter through a filter, wetted with the acid.

Oil, Butter and Cheese Coloring.

1 dram Orange Aniline (soluble in oil).
20 oz. Olive Oil, Sweet Oil or Cottonseed Oil.

Dissolve the orange aniline in the oil by the aid of gentle heat from a water bath. One teaspoonful will be about right for about ten gallons of cream.

Aniline Butter Coloring

½ oz. Oil Soluble Orange Aniline.
5 pts. Cottonseed Oil.

Dissolve by gentle heat. A one ounce bottle sells for 10 cents or a three ounce one for 25 cents. Directions: Use half to three parts of a teaspoonful to each five gallons of cream, according to depth desired.

Strawberry Lemonade

A good seller for the summer season is made as follows and the profit is good:

13 lbs. Brown Sugar.
½ lb. Tartaric Acid.
5 oz. Essence of Strawberry.
¾ oz. Essence of Lemon.
16 gal. warm water.

Mix the first four well together, then dissolve in the water. Color with 20 to 30 grains of eosive piuk according to depth of color desired.

To put up a powder use white granulated sugar instead of brown and mix all first four and the eosive pink thoroughly and put up in waxed paper packets or tin boxes.

Lemonade

To make lemonade without lemon use as follows:

16 oz. Tartaric Acid.
32 lbs. white sugar.
4 oz. Lemon Essence.

Mix thorough and *keep dry* and bottle for use, or use waxed papers or tins.

Directions: Two teaspoonsful to one glass of lemonade.

Blue Black Ink

90 grs. Blue Black Aniline Powder.
16 fl. ozs. Tannin Ink Body No. 2.
20 fl. ozs Dist. Water.
20 Mimins Carbolic Acid.
40 grains Sugar.

Dissolve the blue dye and sugar in water, by the aid of heat, add the remaining ingredients, transfer the mixture to a bottle, tie over the latter's neck a piece of paper, set aside in a cool place for a week and decant the clear liquid from the trifling precipitate.

Tannin Ink Body No 2

3½ av. ozs. Tannic Acid.
4 fl ozs. Sol. Chlor. Iron U. S. P.
2¼ fl. drs. Muriate Acid Com.
32 fl. ozs. q. s. ad. Water.

Mix the two acids, the solution and 7 fl. ozs. of water in a large size flask (quart) on a water bath at a temperature of 80 or 90 degrees C for a period of 10 hours then add 20 fl. ounces of hot water, continue the heat for another hour, transfer to a bottle, cork well, set in a cool place for two weeks, filter and add through the filter enough water to make 32 ozs.

Remarks: This blue aniline powder is put up by Kuttroff, Pickhardt & Company, New York City. It is necessary to use this for good results, as ordinary blue aniline will not do. Either the crystal or powder can be used but prefer the latter.

Brazillian Polish

For cleaning and polishing furniture.

1 pt. Turpentine Copal Varnish.
2 pts. Boiled Linseed Oil.
2 pts. Coal Oil.

Mix.

Cheap Black Ink

1 lb. Nut Galls in coarse powder.
2 lbs. Logwood in coarse powder.
¾ lb. Gum Arabic, cheap, crushed.
½ lb. Green Copperas, crushed.
5 gals. water.

Directions: Boil the nut galls and logwood in the water for four hours, then strain through flannel, and in the strained liquor dissolve the gum and copperas, using no more heat than is necessary to dissolve them, and stirring constantly. If the ink is required to be kept for sometime, shake up with it after it is cold, two ounces of liquid formaldehyde.

Polish for Brown Shoes

1 lb. Beeswax.
1 lb. Yellow Soap.
1 dram Bismark Brown Aniline.
¼ pint Nut Oil.
¼ pint Turpentine.

Melt all together, mix well, and keep stirring until cool. This is usually put in a tin box holding ½ or ¾ ounce and retailing for 10 cents.

Copying Ink for Dry Paper

30 grs. Aniline Black (water soluble).
2 grs. Aniline Blue (water soluble).
16 grs. Ammonia Alum.
2 ozs. Glycerine.
6 ozs. Water enough to make.

Mix the water and glycerine and dissolve the other ingredients in the mixture, shaking well. Use as ordinary ink and after the sheet is written lay on a thin sheet of ordinary copy paper and apply pressure.

Photo Paste

8 ozs. Fine Wheat Flour.
¼ oz. Powdered Alum.
1½ ozs. Glycerine.
1 dr. Oil of Wintergreen.
1½ pts. Water.

Mix the water with flour and alum to a smooth paste and boil till it thickens; then take off the fire, add the oil and glycerine and mix thoroughly, This will keep for years, stick fast every time, and put up in small screw top glass jars sells readily.

Flavoring for Inferior Tobacco

1 oz. Cinnamon bark, crushed small.
2 ozs. Tonka Beans, sliced small.
16 oz. Cheap rum.

Mix and allow to stand for a week, shaking frequently. Then filter through blotting paper.

Red Furniture Polish

16 ozs. Turpentine.
½ oz. crushed Alkanet Root.
4 ozs. Beeswax.

Simmer the alkanet root and turpentine together at the side of the stove for two hours, being very careful it does not boil or catch fire, then strain through funnel and in the strained turpentine dissolve the borax which has been cut up small.

Chewing Gum

To make spruce gum:

20 parts Spruce Gum.
20 parts Chicle.
60 parts Sugar powdered.

Melt the gum separately, mix while hot and immediately add the sugar, a small portion at a time, kneading it thoroughly on a hot slab.

When completely incorporated remove to a cold slab, previously dusted with powdered sugar, roll out at once into sheets and cut into sticks.

Any desired color or flavor may be added to or incorporated with sugar. Note: Fresh cream and powdered guarana or kola are also largely used in the manufacture of chewing gum.

Pepsin Chewing Gum

3½ lbs Gum Chicle.
1 lb. Parafin Wax.
2 ozs. Balsam Kola.
1 oz. Balsam Peru.
1 oz. powdered Pepsin.

Dissolve the gum in as much water as it will take up, melt the parafin and mix all together.

Now take:

10 lbs. Sugar finely granulated.
4 lbs. Glucose.
3 pints Water.

Put the sugar and glucose with the water and boil them to crack degree and pour the syrup upon an oil slab, and turn into it sufficient of the above mixture to make tough and plastic.

Mexican Tamalas

Take white inside corn shucks. Soak one night in warm water. Take one gallon white corn, add 3 ounces of slacked lime; enough water to cover; boil two hours until corn is soft, then wash the grains in clear water and rub off the husks from the grains. Grind and mash to a thick, pasty dough, adding salt to taste. This is the mass.

Take either fresh lean pork, or if preferred, chicken meat, three or four pounds, boil until done, preserving the flavor in the meat. Take off; chop and grind to a fine pulp. Take of genuine Mexican Chilli pods, six ounces, put into hot water until soft, remove stems, seeds and scrape the soft Chilli out of the skin. Add two ounces ground Oregano (Sweet Majorom); one ounce ground cloves; stir together and mix well with the meat, making a paste. This is the filling.

Take one of the shucks and spread out on a clean, smooth surface, cover all of the big end of the shuck to about two-thirds up (leaving one third of the small end empty) with a layer of the "mass" above mentioned. Put upon the mass nearly a tablespoonful of the prepared filling. Roll sidewise, like making a cigarette, and turn down the empty end of the shuck to hold in the contents. Lay the tamalas carefully into a steamer and steam well for two hours. Serve hot.

Note—Tamalas, after steaming may be packed like sardines in small tins, with directions to the consumer to heat the tin in water before opening to serve.

The proportions in recipe may of course be varied to suit taste.

Chili-Con-Carni

Take lean beef, cut into small pieces like dice. Wash, add salt and stew. When done, skim off the fat, make a

chili sauce of chili, oregano, etc., like in the tamala recipe. Add this to the meat and stew until the sauce is well stewed into the meat. If necessary add a little water while stewing but not much. It is better rather thick. Serve hot. Proportions of this recipe will be regulated by the chief cook. This may be packed for sale in tin cans.

Imperialist Sauce

7 gals. Tomato Catsup.
7 gals. Worcestershire sauce.
4 gals. Mixed Mustard.
2 gals. California Sherry.
2 gals. Molasses (treacle).
½ dr. Oil of Garlic.
Dissolved in Alcohol (S. V. R.) 8 ozs.
Coloring to suit.

This is a good article and will prove acceptable to the public. It may be christened Porto Rico, San Juan, Mannillino, Fillipinio, Omdurman, Kitchner's Superlative Sirdar, Tartar, or any suitable name that may suggest itself. The gallon used above is 128 ozs.

Paragon Stick Blue

8 lbs. Soluble Blue.
4 lbs. Powdered Borax.
4 lbs. Yellow Dextrine.
1½ lbs. Oxalic Acid.
2 lbs. Gum Senegal.

Dissolve the gum in sufficient hot water to make the whole into a thick paste. Before mixing, run all the ingredients through a fine sieve.

Cheap Stick Blue

4 lbs. Soluble Blue.
4 lbs. Common Salt.
4 lbs. Yellow Dextrine.
4 lbs. Borax.
2 lbs. Gum Senegal.
1½ lb. Oxoalic Acid.
Water q. s. (quantity sufficient.)
Mix same as above.

Peanut Butter

Take 8 pounds of roasted peanuts grind in mill to break up the shells and to rub off the red skins, it will separate the kernels into halves; then with the wind mill blow away the shells. Add to the kernels, all the fine salt that will adhere, and then pass them through the mill, grinding to a very fine, smooth, soft, oily, tough, delicious yellow butter, that will spread on crackers, bread etc. You have five pounds of nut butter that contains more nutriment, than ten pounds of cow butter, which would cost you much more. Mills for this purpose are sold by Kelso & Co., Importers, 209-211, south Clinton St., Chicago, Ill. and also A. W. Straub & Co., Philadelphia.

Ball Bluing

4 ozs. Superfine Ultramarine.
2 ozs. Ordinary Ultramarine.
4 ozs. Sodium Carbonate.
9 drams Glucose.

Mix and make into a stiff paste by the aid of water, roll out into a thick sheet and cut into balls or cubes, dry at a gentle heat.

Liquified Sulphur

1 oz. Lime.
2 ozs. Sulphur.
1 qt. Water.

Boil in enameled or porcelain lined vessel, for thirty minutes. This preparation will make a good selling specialty; is inexpensive and has merit. A few drops of the above in a tumblerful of water produces a sulphur water. One or two ounces make a valuable addition to the bath, where the use of sulphur is indicated. For its other good qualities see the patent medicine advertisements.

Polishing Liquid

For Polishing Metals

3 ozs. Tripoli, in fine powder.
1 Dram Tartaric Acid.
14 fl. ozs. Gasoline.
5 Drops Oil of Mirbane.

Sift the powders to remove the grit. Mix with the gasoline and Oil of Mirbane.

Directions: Shake well and apply with woolen or cotton rag, rub briskly until the dirt is removed, then polish with a dry chaimois.

Mince Meat

Boiled Lean Beef.....½ lb.
Chopped Beef Suet.....¼ lb.
Raisins, Seeded.....½ lb.
Currants, Washed.....½ lb.
Brown Sugar.....1 lb.
Molasses, (Treacle).....4 fl. oz.
Chopped Peeled Apples.....1 lb.
Table Salt.....½ oz.
Cinnamon, pow'd.....90 grs.
Cloves, pow'd.....90 grs.
Nutmeg, pow'd.....90 grs.
Citron Peel.....4 ozs.
Grated rind and juice of.....½ Lemon
Apple Cider.....8 ozs.
Apple Vinegar.....4 ozs.
Soda Crackers, rolled fine.....8 ozs.
Caramel (burnt sugar).....1 oz.
Water.....24 ozs.
Alcohol (sp'ts. of Wine).....2 ozs.
Salicylic Acid.....15 grs.
Tartaric Acid.....½ oz.

Beef to be run through an Enterprise Meat Cutter or chopped fine. Raisins to be seeded and not chopped. Currants to be washed and dried Mix well and steam. When heat is withdrawn, add the alcohol in which the Salicylic acid has been previously dissolved, and the Tartaric acid dissolved in eight ounces of water. Pack in tins, kegs or barrels.

Starch Gloss Solid

French Chalk.....3 ozs.
Pwd. White Soap.....1 oz.
Mix.

Directions: Take a piece of dry flannel and dip it into the glaze powder, rub it well over the right side of the starched article, then proceed to iron in the usual way, when a beautiful gloss will be obtained. Put in a little borax to gain stiffness as usual.

Starch Gloss Liquid

1 oz. Spermaceti.
1 oz. Gum Arabic.
1 oz. Borax.
2½ ozs. Glycerine.
14½ ozs. Water.

Boil ½ the water aud borax and add spermaceti to it. Separately dissolve the gum in the remainder of the water and Glycerine. Strain and mix thoroughly with the warm water mixture. This is a good gloss for cold water starch, a wine glass full of it is used with 4 ounces of dry starch or say a tablespoonful or a heaped tablespoonful of starch.

Starch Gloss

2 ozs. Glycerine.
2 ozs. Spirit of Turpentine.
2 ozs. Borax.
1 lb. Cold water starch.
6 pts. Water.

Rub down the starch with water to a smooth paste, then add the rest of the water in which the borax has been dissolved. Add the glycerine and turpentine last.

Epicurian Sauce

2 ozs. Indian Soy Walnut Catsup.
8 ozs. Walnut Catsup.
8 ozs. Mushroom Catsup.
2 ozs. Port Wine.
½ oz. White Pepper (powdered.)
3 ozs. Shallotts.
½ oz. Cayenne.
½ oz Cloves.

Macerate 14 days in a warm place, strain and add white wine vinegar q. s. to make 16 ounces.

Cockroach Exterminator

1 lb. Amorphous Phosphorous.
1 lb. Paris green.
16 lbs. pwd. Wormwood herb.
1 lb Sabadilla.
Mix well and sprinkle in their haunts.

Roach Paste

1 pt. Glucose.
1 oz. Napthaline.
Dissolve color with aniline red soluble in oil or Alkanet root.

Ko-Ko Fruitta

8 ozs. fl. Ex. Cocoa Miscible.
6 ozs Fl. Ex. Kola.
2 ozs. Fl. Ex. Gentian.
4 ozs. essence of Vanilla.
4 ozs. essence of Rose.

8 ozs. Solution of Citric Acid.
or
8 ozs. Solution of Phosphate.
6 ozs. Caramel.
Simple syrup to make 128 ozs.

Root Beer Essence

1 oz. Oil of Sassafras.
¾ oz. Oil of Wintergreen.
⅜ oz. Oil of Anise.
⅛ oz. Oil of Cloves.
3¾ oz. Oil of Alocohol.
4 oz. of Water.
6 ozs. Caramel.

If bitterness is needed, add tincture of Quassia, 1 oz.

Marmalade

(From Skuse's Art of Confectionery)

Have every ingredient of prime quality and utensils scrupulously clean. Use sound heavy Seville or Malaga oranges. There is a fine quality of almost transparent marmalade now in the market, known as homemade. Almost innocent of chips, consequently not so bitter and a great favorite with the children. This sort is largely made up of orange pulp known in the trade as "Dummies."

Within the last few years, the rinds only of the orange is used by some firms for making essential oils. The pulpy portion is sold at a low price to marmalade makers.

To prepare the chip and pulp: Put any quantity of oranges into a tub, cover them with boiling water and let them soak for a few minutes, then pick them up, one at a time, and mark the rind with a knife into four quarters; now separate the pulp from the rind, pack the rind cup shape into boxes of the machine, and cut them into slices. When cold, sort them over: take out those imperfectly cut and put them through the machine again: if well packed in the machine box in the first instance, there will be but few that require recutting. Now take the slices, fill the steam tub, turn on the steam and let them cook until tender: try them between the fingers and thumb; when you can nip them off short, they are done, or they may be boiled in a steam pan by covering them with water, the steam turned on, and allow to cook for nearly two and a half hours; when ready, take them out and strain through a wicker sieve.

To prepare the pulp, put any quantity into a steam pan, cover them with water, turn on the steam and stir with a long flat stick until reduced to a mass of pulp, now take them out and rub them through a cone sieve, just large enough to keep back the pips, or put them through a pulping machine with copper sieve, eight holes to the inch. Dummies are treated, of course, same as pulp.

Sup. Orange Marmalade

40 lbs. Orange Pulp strained.
10 lbs. Orange Chips.
60 lbs. Dutch Crushed Sugar.
1 gal. Best Apple Juice.

Process: Pass half of the pulp while hot through a coarse hair sieve; mix all the ingredients together in a pan and boil off in the ordinary way. The oranges for home made article should be specially heavy, with a thinnish skin. N. B.—When there is a super-abundance of chips and no dummies to be had, work up the surplus chips in cheaper qualities, using apple juice and glucose. When preserving the orange pulp for future use, mix the pulp and chips together in the proportion for boiling.

Improved Tea Flavor

6 ozs. Cassie Flowers (not Cassia.)
2 ozs. Orange Flowers.

Take the whole flowers pound them in an iron mortar or grind them to a coarse powder, moisten them with a mixture of

2 ozs. Tincture of Cassie.
½ oz. Spirit of Viozone.
10 grs Aniline Blue Soluble in Spirit.

The cassie and orange flowers and tincture of cassie may be purchased of Fritzschie Bros. 37 Barclay St., New York.

The Viozone is a synthetic violet preparation and may be obtained of W. P.

Ungerer, 18 Cedar St., New York, or Ionone may be used instead of Viozone but it is more expensive. Ionone is for sale by L. W. Keisen & Co., 52 Dearborn St. Chicago. Spirits of Viozone is made by adding one ounce of their respective preparations to 19 ounces straight coloring spirits—alcohol 188 proof.

Tea Tasting

The following hints on tasting have been abridged from the "Tea Planters' Vode Mecum" and "Rutherford's Note Book." In tasting tea the tea-maker should look to the four following characteristics: (1) Its nose or smell; (2nd) Its liquor; (3rd) Its infusion; (4th) Its leaf.

1st. Its nose, whether strong, rich scent, minty, nutty, musty, burnt, high fired, or brisk, judged by smell.

2nd. Its liquor, whether strong, rasping, pungent, brisk, flavory, full, thick, nutty, dark, or wanting in strength, dull, insipid, thin, burnt, over-fired, soft; judged by taste.

3rd. Its infusion bright or dark colored, or mixed with green, or any dark or burnt leaves, amount of stalk, and whether over or under fermented; judged by sight.

4th. Leaf. Its make and appearance, whether black, wiry, even, regular, well, little or open twisted, hard or light rolled, flaky, bold. tippy, grey, dusty or irregular, wanting in tips, etc; judged by sight.

Chewing Gum

2 lbs. Prepared Balsam of Tolu.
3 lbs. Fine Powdered Oatmeal.
1 lb. Fine Powdered Sugar.
½ oz. Oil of Wintergreen.

Soften the Tolu in a water bath and then add the sugar with which you have mixed the oil, stir and gradually add the oatmeal. Work up with hands, when well mixed, keeping them rubbed in fine powdered sugar. Then roll out flat and cut in sticks or cakes the size wanted.

The prepared "Tolu" mentioned in the formula is made as follows:

Prepared Balsam of Tolu

1 lb. Genuine Balsam of Tolu.
4 lbs. White Resin (crushed).
6 ozs. Mutton Suet.

Melt the Resin and Tolu together in a saucepan at a gentle heat, stirring well. When melted add the suet. Take from the fire and stir till cool. Of course in making up chewing gum you can substitute any other flavoring for the Wintergreen.

Grease Remover

1 pint Benzine.
2 ozs. Pure Alcohol.
2 ozs. Sulphuric Ether.
1½ drams Essence of Lemon.

This is a great seller and the profits are large. A one ounce bottle of this sells for ten cents. The direction is to sponge over the grease marks with a piece of clean flannel wet with the remover.

Artificial Honey

The best is:

10 lbs. Brown Sugar.
4 pints Water.
45 grs. Cream of Tartar.
10 drops Essence of Peppermint.
3 lbs. Bee's Honey.

Dissolve the sugar in the water over a slow fire and take off the scum. Then dissolve the cream of tartar in half a cup of hot water and add; stir well, warm the honey and add that; stir again until well mixed, then take off the fire, add the peppermint and stir until cold.

The formula without bee's honey is this:

4 lbs. Brown Sugar.
1 pint Water.

Bring them to a boil and take off the scum: then add powdered alum, one-fourth ounce, and cream of tartar, one-half ounce, dissolved in half cup of hot water. Stir well until thoroughly mixed; take off the fire and stir in fifteen drops of essence of honeysuckle flowers. Stir well until cold.

Findings for a Cutt of Sherry Wine

Put two ounces of isinglass into a jar with one quart of sherry, near the fire; when soft beat and whisk up to a froth with the white of six eggs; thoroughly mix the whole with a gallon of the wine, and return it to the cask; rouse the whole well up. This will answer well for madeira, etc.

Roach Powder

2 lbs Powdered Borax.
½ lb. Powdered Sugar.
¼ lb. Powdered Cocoa.

Mix and put up in tin cans, directing it to be sprinkled wherever the roaches are plentiful.

Effervescing Lemonade Powder

The following is a good formula but care must be taken that all ingredients are dry and in fine powder.

3 lbs. Powdered Sugar.
3 ozs. Tartaric Acid.
3 ozs. Bicarbonate of Soda.

Mix by sieving and rub up with two teaspoonfuls of good essence of lemon. Wrap in wax paper pockets. Two teaspoonfuls of this powder added to a glass of ice water makes a very nice effervescing lemonade.

Glycerine and Honey Jelly

2½ ozs. Gelatine.
10 ozs. Honey.
60 ozs. Glycerine.
27½ ozs. Water.

Dissolve the gelatine in the water with gentle heat, then add the honey and lastly the glycerine. Stir well and add 30 drops of oil of geranium and when thick pour into small pots. To be rubbed on the hands at bed time when red and chapped.

Shaving Cream

8 ozs. Curo Soap.
1 oz. Glycerine.
¼ oz. Carbonate Potash.
2 ozs. Almond Oil.
½ oz. Spermaceti.
16 ozs. Water.

Cut up the soap small and dissolve in 14 ounces of the water by heat. Dissolve the spermaceti in the oil by aid of heat and when dissolved mix in the glycerine and the carb. of potash dissolved in the other two ounces of water. Transfer to a warm mortar or bowl and thoroughly mix in the soap solution. Perfume with a few drops of oil of lavender or citronella. Put up in pots for sale.

Making Labels Stick to Tin

No matter what paste or mucilage is used you can make it stick by adding 30 drops of solution of chloride of antimony to every 8 ounces of paste or mucilage and mixing well.

Liquid Starch Gloss

Make a solution of.
4 ozs powdered Borax.
1 pt. Rainwater.
Now make another solution of
¼ oz. Powdered Gum Tragacanth.
10 ozs. hot water.

When both solutions are quite free from any undissolved particles mix them and shake together. This is the gloss. The direction is to use one teaspoonful to each pint of starch. Put in 3 ounce bottles to retail at 10 cents. This shows a large profit and as it has merit there is a constant demand for it after once used.

Sand Balls

Cut up two pounds of yellow soap in thin slices and melt in a kettle with six ounces water. When melted stir in 1 lb. finely sifted and washed sand, the clear white silver sand or sea shore sand being the best. Mix up well and pour into a tray, continuing stirring as it begins to set. Before it sets hard mould it with the hands into balls or ovals about the size of a hen's egg and set aside for a day or two to dry.

These balls are very durable, especially if you arrange to dry them a month or two before selling, and in many manufacturing and iron working districts sell largely.

Oak Varnish

3½ lbs. Crushed Clear Rosin,
1 Gallon Turpentine.

Dissolve by gentle heat. Great care must be taken in making this or the turpentine will catch fire very easily. If you like you can put them in a demijohn, cork well, and by shaking for a few days avoid using heat. Unless you are used to handling turpentine over a fire this will be the safer way.

A three ounce bottle retails for fifteen cents and the directions is to apply it to the furniture to be brightened up with a soft brush. I think it would be best to put up bottle and small brush so as to retail for twenty-five cents.

Black Stain for Leather

3 ozs. Extract of Logwood.
¾ oz. Ivory Black.
½ oz. Glycerine.
12 grains Bichromote of Potash.
12 grains Copperas.
½ gal. Water.

Boil all together. As well as being efficient this is also cheap and can be put in 3 oz. bottles to retail for fifteen cents. It is largely used for turning shoes black,

Directions: Apply with a sponge or soft brush, giving a second coat if necessary.

This will be good.

Furniture Oil

2 oz. Acetic Acid.
½ oz. Cheap Oil of Lavender.
1 oz. Cheap Wood Alcohol.
Mix and shake well together.

Rub on the furniture with a small pad of woolen cloth and polish with a piece of Canton flannel. This will make a good seller.

To Keep Cider from Souring

When the cider has reached the flavor desired, add one or two tumblersful of grated horseradish (according to size of barrel) to each barrel and stir it a little so as to mix with the cider.

Liquid Bluing

1 oz. Prussian Blue.
½ oz. Oxalic Acid.
1 qt. Warm Water.

This is to be put up in small bottles to retail for 5 or 10 cents. Directions: A few drops to be added to the water in which the clothes are rinsed until the desired shade is obtained.

Razor Paste

Butter powder, Jeweler's rogue, finest emery powder, beef suet, of each 1 ounce.

Mix the powder first, then melt the suet and mix all together.

Ink Powder

¼ oz. pwd. Sulphate of Copper.
½ oz. pwd. Gum Arabic.
2 ozs. pwd. Copperas.
8 ozs. pwd. Nutgalls.
8 ozs. pwd. Extract of Logwood.

Have all in fine powder and mix thoroughly; wrap in waxed paper ½ ounce packets which sell for 5 cents in some places and 10 cents in others. The ½ ounce is to be dissolved in ½ pint of boiling water. There is a good profit in this.

Laundry Tablets

This is a good seller and will sell rapidly when introduced and pay a big profit. *It is a repeater.*

Melt 6 pounds of white paraffine. In a quart of warm water dissolve 6 ounces of powdered borax and when dissolved pour into the melted wax and stir well. When mixed pour into a large pan to cool and set. You now have a big cake borated wax with the water you used left at the bottom. Throw away the water and again melt up the wax and as soon as melted pour into a shallow tray to set. Pour about ½ inch deep. When cold cut into square tablets of about ½ inch each. One of these is to be dissolved in the water to work the dirty clothes. It saves rubbing, saves time and saves wear on the clothes. The best way is to wrap two tablets in a circular advertising them, and sell for 5 cents.

Cheap Vanilla Extract

This paragraph refers to the cheap Vanilla at 30 cents per gallon on another page. Use *musk baur*. Civetal is another kind of musk and it is better to make cheap vanilla. Some manufacturers use a little genuine musk in making a fine vanilla.

Flour—How to Select

The Scientific Encyclopedia says: Look at its color. If it is white with a slightly yellowish straw color tint, it is a good sign. If it is very white with a bluish cast, or with black specks in it, the flour is not good. 2nd.—Examine its adhesiveness—wet and knead a little of it between the fingers; if it works dry and elastic, it is good; if it works soft and sticky it is poor. Flour made from spring wheat is likely to be sticky. 3rd—Throw a little lump of dry flour against a dry smooth, perpendicular surface: if it adheres in a lump, the flour has life in it, if it falls like powder it is bad. 4th.—Squeeze some of the flour in your hand; if it retains the shape given by the pressure, that too, is a good sign. Flour that will stand all of these tests is safe to buy.

Flour, Self Rising: The following are the composition of several of these powders in extensive use: (1)—Bicarbonate Soda, 23 ozs; burnt alum, 19 ozs: starch 57 ozs. (2)—Bicarbonate of soda, 24¼ ozs; sesqui carbonate soda, 2¼ ozs.; starch, 47 ozs: burnt alum, 26½ ozs. (3)—Bicarbonate soda, 31 ozs; burnt alum, 29½ ozs: starch 39 ozs.

Lemon Juice Artificial

Citric or Tartaric acid, 2¼ ozs.; gum, ½ oz.; pieces of fresh lemon peel, ¾ oz.; loaf sugar, 2 ozs.; boiling water, 1 quart; moderate with agitation until cold and strain. Excellent. 2nd—water, 1 pt.; sugar, 1 oz.: essence of lemon, 30 drops; pure acetic acid to acidulate. Inferior. Both are used to make lemonade.—*Scientific American.*

Cement for Attaching Labels to Tin

Much difficulty is experienced by many people in attaching labels to tin boxes. We give the following. On another page we give another formula. You may take your choice.

Gum Tragacanth.....10 parts
Honey.....10 parts
Wheat Flour.....1 part

Mix thoroughly and apply.

Flavoring Powders

A good many people would rather use a powder extract in preference to a liquid, believing the powders contain no alcohol.

Oil of Lemon.....1 oz.
Alcohol.....1 oz.
Powdered Sugar.....2 lbs.

Put the oil and alcohol in a bottle, and shake thoroughly; place the sugar in a dish, and add the liquid slowly and stir constantly. When thoroughly mixed, set away to dry. When thoroughly dry it should be pulverized again, and packed in air tight boxes or cans holding 2 ozs. This is a good seller. Proceed the same with oil of Orange, Cloves, Cinnamon or other oils or extracts.

Directions for using Powders—Use from one-fourth to one-half teaspoonful to the quart of mixture, varying more or less to suit the taste. Can be used in dry state or dissolved in water. Retail price ten cent an ounce, or three ounces for twenty-five cents.

Rising Sun Pancake Flour

60 lbs. Flour.
60 lbs. Buckwheat.
60 lbs. Corn Flour.
7 lbs. Cream Acid Phosphate.
4 lbs. Salt.
3 lbs. Soda Bicarb.
5 lbs. Sugar.

Mix.

Artificial Maple Syrup

Here is a formula which is the best and latest thing out; no chemicals, corn cobs or anything injurious. It will cost about twenty-five or thirty cents per gallon to make.

Merck's report says: Boil simple syrup, remove from fire and add in the shape of strips the inner bark of *Carya Alba* (Hickory) or *Carya to mentosa* (White heart Hickory), half an ounce to the pint of syrup: let stand for five or ten minutes and then strain.

Maple Syrup

Here is another which is used by one of the largest manufacturers of maple syrup in the country. They take *Sugar Syrup*, Glucose and boil with *maple chips*. If you mant more body to the syrup use more Glucose. Try it and see what an elegant preparation it will make.

For Birch Beer Extract

This formula will make a good preparation:

Sassafras	4 parts
Wild Cherry Bark	2 parts
Pimento	4 parts
Wintergreen	4 parts
Hops	1 part
Coriander Seed	2 parts

Percolate with dilute alcohol until forty parts of tincture are made.

This extract may be added to plain soda water, in the proportion of half teaspoonful to an ordinary glass. If desired, same may be added to the extract in suitable quantity to modify the taste. For the fountain, eight or ten fluid ounces may be added, together one gallon syrup, to nine gallons of water, and the whole carbonated.

Bay Rum

Take bay leaf otto, ½ oz.; magnesium carbonate, ½ troy oz ; jamacia rum, 1 qt.; alcohol, 3 pints. Triturate the otto with the magnesium carbonate, gradually adding the other ingredients previously mixed and filtered.

Liquid Laundry Blue

2 gallons Water.
1½ lbs. Indigo Carmine.
¾ lb. Gum Arabic.
Dissolve and strain through muslin.

Root Beer Extract

1 pt. Fluid Extract of Sarsparilla.
2 ozs. Fluid Extract Calamus.
4 fl. drs. Oil Sassafras.
1 fl. dr. Oil Wintergreen.
1 fl. dr. Oil Anise.
1 pt. Alcohol.
Water to make 1 gallon.
Caramel to Color.

Mix the caramel with 2 pints water, add the fluid extracts, then the oil previously mixed with the alcohol, and finally enough water to make one gallon.

Liquid Blue

Here is a formula supposed to be very fine, at least the writer knows of one person who made and sold lots of it. Put up in 8 oz. bottles and sell for 15 cents retail.

Tieman's Soluble Blue	8 ozs.
Oxalic Acid	4 ozs.
Water to make	1 gal.

Very fine.

Star Hair Oil

Castor Oil	6½ pts.
Alcohol	1½ pts.
Oil Citronella	½ oz.
Oil Lavender	½ oz.

Mix and put up in two-ounce botles to sell at 10 cents.

Washing Blue

This makes a fine washing blue and one on which there is a good profit. Dry Prussian blue powdered, 1 lb; enough hot water to form a paste; potassium ferrocyanide, 1½ ozs. Mix and allow to dry. Powder and put up a half ounce in each envelope to retail at 10 cents.

Cold Cream to Remove Wrinkles

8 ozs. Lanolin.
2 ozs. Vaseline.
2 ozs. Rose Water.
3 grs. Vanilin.
2 drops Oil Rose.

Mix without heating lanolin. Of the constituents in the above is a true skin food. Wrinkles are caused by absorption of the adipose tissue. Lanolin gives

nutriment to wasted tissues; hence, using night and morning for a short time will cause wrinkles to disappear.

Antiseptic Foot Powder

½ oz. Salicylic Acid.
4 ozs. Boric Acid.
8 ozs. Powdered Starch.
15 drops Eucolytus Oil.

Mix. To be dusted freely over the feet and into the toes and heels of the stockings. Easy to make and big profit in it.

Freckle Lotion

Carbonate of Potash..... ...1 dram
Spirits of Camphor.....1 oz.
Tincture of Benzoin.....1 oz.
Essence of Musk.....10 drops
Water.....7 ozs.
Eau de Colonge to.....30 ozs.

Dissolve the potash in the water and add to the other ingredients previously mixed. Stand several days and filter. The article to be put in neat bottles and wrapper, the bottle to contain five or six ounces.

Laundry Bluing

1 oz. Prussian Blue.
¼ oz. Oxalic Acid.
1 qt. Rain Water.

Dissolve and settle. A teaspoonful is enough for a large washing.

Tooth Soap

Calcium Carbonate.....56 parts
Soap.....44 parts

Add water enough to make proper consistency and mix. Put up in collapsible tubes which can be procured from A. H. Wirz, Philadelphia, Pa. This may be scented with the oil of Wintergreen. There is good money in this as it can be made for one-fourth cent each for two ounce tube.

Rose Jelly

Rose jelly can be made as follows:

Flaxseed Jelly.....1 pint
Glycerine.....4 ozs.
Salicylic Acid.....5 grains
Oil Geranium, quantity sufficient to perfume. Mix and shake well together.

To Set Color in Lawn

Dissolve ½ lb. of saltpetre in a pailful of water, dip the lawn in it several times before washing.

Mentholated Cream

The following preparation is used quite extensively by barbers, as a cool and grateful application to the skin after shaving: Put ½ ounce best gum tragacanth in 12 ounces of water, and let stand, with occasional shaking for two or three days; then add 3 drams glycerine and 40 grains menthol dissolved in ½ ounce alcohol. Color pink with tincture of cudbear.

Beverages

The following formulas are taken from Griffith's Non-Seret Formulas. The book is valuable and I would advise you to read it.

Ginger Wine

Sugar.....4 lbs.
Water..... 5 pints

Dissolve by the aid of heat, strain and add the following mixture:

Soluble Essence of Ginger.....6 drams
Tincture of Orange.....2 ounces
Essence of Raspberry .....15 drops
Essence of Peppermint.....3 drops

Beef and Malt Wine

Extract of Beef.....4 ozs.
Extract of Malt.....8 ozs.
New Port Wine.....1 gallon

Rub down the extracts with sufficient wine to make a thin syrup, add to the bulk, shake and set aside for a few weeks; then decant the clear portion and filter the sediment.

Ginger Ale Essence

Ol. ros. geranii.....5 minimis
Otto rosae.....10 minimis
Ol. Caryoph.....10 drops
Ol. Cinnamon.....½ dram
Tr. capsici.....6 drams
Sarch. ust.....q. s.
Ess. Zingib. sol. ad.....1 pint

Mix. Use 1½ ounces of essence to the gallon of syrup.

Kola Champagne Essence

Fluid Extract of Kola.....4 ounces
Tincture of Canella.....½ ounce
Tincture of Orange.....2 ounces
Essence of Cherry.....3 drams
Essence of Cloves.....2 drams
Proof spirit to.....20 ounces

Mix two ounces to the gallon of syrup and color with cochineal.

Ginger Beer

Jamacia Ginger.....2½ ounces
Moist Sugar.....2 pounds
Cream Tartar.....1 ounce
Bruised Ginger Root.....2 ounces

Infuse the ginger in the boiling water, add the sugar and cream of tartar; when lukewarm strain; then add one-half pint good yeast. Let it stand all night, then bottle. If you desire you can add one lemon and the white of an egg to fine it.

English Ginger Beer

Water.....3 gals.
Pulverized Ginger.....6 ozs.
Sugar.....4 lbs.
Cream Tartar.....4 ozs.

Boil and when cool add 2 tablespoonsful of yeast. Allow it to stand over night, then filter and bottle.

Ginger Beer Powder

Jamacia Ginger Powdered.....1 oz.
Sodium Bicarbonate.....7 ozs.
Sugar.....1¾ lb,
Oil of Lemon.....1 fl. dr.

Make it into powders.

Ginger Beer Powder

The London Chemist and Druggist says that a powder may be prepared thus:

Ginger, bruised.....½ oz.
Cream of Tarter.....¾ oz.
Essence of Lemon.....4 drops.

Mix.

Some sugar may be added if thought desirable to make the packet look bigger. For use this powder is to be added to a gallon of boiling water, in which dissolve 1 pound of lump sugar, and when the mixture is nearly cool two or three tablespoonsful of yeast are to be added. The mixture should be set aside to work for four days, when it may be strained and bottled.

Hop Beer

Water.....5 qts.
Hops.....6 ozs.

Boil 3 hours, strain the liquor, add:

Water.....5 qts.
Bruised Ginger.....4 ozs.

Boil a little longer, strain, and add:

Sugar.....4 lbs.

When milk warm, add:

Yeast.....1 pint

Let ferment; in twenty-four hours it is ready for bottling.

Lemon Beer

Boiling Water.....1 gallon
Lemon, sliced.....1
Bruised Ginger.....1 ounce
Yeast.....1 teacupful
Sugar.....1 pound

Let it stand twelve to twenty hours, and it is ready to be bottled.

Lemon Beer

Water.....1 gallon
Sliced Lemon.....1
Ginger.....1 tablespoonful
Syrup.....1 pint
Yeast.....½ pint

Ready for use in 24 hours. If bottled tie down the corks.

Maple Beer

Boiling water.....4 gals.
Maple Syrup.....1 qt.
Essence of Vanilla.....½ oz.

Add

Yeast.....1 pt.

Proceed as with ginger pop.

Maple

Boiling Water.....4 gals.
Maple Syrup.....1 qt.
Essence of Spruce.....½ oz.

Add

Yeast.....1 pt.

Let it ferment for 24 hours, and then strain and bottle it. In a week or more it will be ready for use.

Root Beer

Boiling water.....5 gals.
Add Mollases.....1½ gal.

Allow to stand 3 hours, then add:

Bruised Sassafras bark.....¼ lb.
Wintergreen bark.....¼ lb.
Sarsparilla root.....¼ lb.
Fresh Yeast.....½ pt.

Water enough to make 15 to 17 gallons. After this has fermented for 12 hours it can be drawn off and bottled.

Root Beer

Pour boiling water on

Sassafras.....2½ ozs.
Wild Cherry bark.....1½ ozs.
Allspice.....2½ ozs.
Wintergreen.....2½ ozs.
Hops.....½ oz.
Coriander seed.....½ oz.
Mollases.....2 gals.

Let the mixture stand 1 day. Strain and add

Yeast.....1 pt.

This beer may be bottled the following day.

Spruce Beer

Hops.....2 ozs.
Chip Sassafras.....2 ozs.
Water.....10 gals.

Boil ½ hour, strain, add

Brown Sugar.....7 lbs.
Essence of Spruce.....1 oz.
Essence of Vanilla.....½ oz.
Ground pimento.....½ oz.

Put in a cask and cool, add

Yeast.....1½ pts.

Let it stand 24 hours. Fine. Draw it it off and bottle.

Spruce Beer

Hops.....8 ozs.
Chip Sassafras.....2 ozs.
Water.....10 gals.

Boil ½ hour, strain, and add:

Brown Sugar.....7 lbs.
Essence of Spruce.....1 oz.
Essence of Ginger.....1 oz.
Ground Pimento.....½ oz.

Put into a cask, and cool, add

Yeast.....1½ pts.

Let it stand 24 hours. Fine. Draw it off and bottle.

Spruce Beer

Essence of Spruce.....½ pt.
Pimento.....5 ozs.
Ginger, bruised.....5 ozs.
Hops.....½ lb.
Water.....3 gals.

Boil the whole for 10 minutes, then add

Moist Sugar.....12 lbs.
Warm water.....11 gals.

Mix well and when lukewarm add 1 pint yeast. After the liquor has fermented about 24 hours bottle it.

Root Beer Extract

Tincture of Ginger.....12 ozs.
Extract of Vanilla.....12 ozs.
Oil of Sassafras.....4 ozs.
Oil of Wintergreen.....2 ozs.
Oil of Anise.....1 oz.
Oil of Orange.....¼ oz.
Oil of Cloves.....¼ oz.
Alcohol.....½ gal.
Simple Syrup.....3½ gals.
Tincture of Soap Bark.....4 ozs.
Salicylic Acid.....1 dr.
Caramel.....1¼ gals.

Water q. s. to make up to 6 gallons. Dissolve the oils and the salicylic acid in in the alcohol; mix the syrup, water and caramel and add the other ingredients.

Acid Solution of Phosphates

Potassium Phosphate.....1 part
Magnesium Phosphate.....2 parts
Sodium Phosphate.....1 part
Calcium Phosphate.....3 parts
Ortho Phosphoric Acid.....48 parts
Water sufficient to make.....768 parts

Acid fruit syrup contains 8 ounces of this solution to the finished gallon, the latter consisting of 6½ to 7 pints (usually the latter) of simple syrup, the remaider being the material which go to make up the fruit flavor.

Perfumery

The materials used in perfumery are chiefly the following, viz:

1, Pomade washings; 2, concrete floral essence; 3, essential oils; 4, arromatic gums; 5, flower waters; 6, tincture of Ambergris; 7, natural musk from the musk ox; 8, artificial musk; 9, civet; 10

civetol; 11, artificial essential oils; 12, products of the new chemistry.

The finest handkerchief extracts made by the old world-renowned manufacturers are made from the pomade washings combined with natural musk, ambergris, essential oils and aromatic gums.

The concrete flower essence are substitutes for the pomade washings, but not in my opinion equal to them. The artificial essential oils are for the most part inferior to the natural. The cheap perfumes with which the market is flooded are products of the new chemistry.

The pomades from which the pomade washings are made are regular articles of commerce and are sold by all dealers in perfume supplies. The pomades are imported mostly from France and Germany. The washings may be bought, but it is more economical to buy your pomades and wash them yourself.

Pomades

The pomades used by perfumers are made mostly in France. They are put up in tin cans of 2½ and 5 kilogrammes each. It is often hard to get the smaller cans, the large ones being generally kept in stock by dealers. I cannot quote the price at the present writing, but rose, jasmine, orange, tube rose, etc., are worth from $1.50 to $2.00 per pound, perhaps some $2.25 per pound and violet is worth $2.50 to $2.75 per pound, according to the number of enfleuroges, or in other words according to the strength of the pomades.

Enfleuroges

Cotton batting is saturated with grease and spread on trays in a room kept at proper temperature. The greased cotton is covered with say rose leaves, after a few days the rose leaves are faded and scentless, the oder having been absorbed by the grease. The exhausted leaves are then removed and replaced by fresh ones until the grease is fully saturated with the oder. The grease is then run into cans and exported for the use of perfumes. There are other methods, some new, but none in my opinion which give so good results as the one above described.

Washing Pomades

Take a vessel with wide opening in the top, a milk can does very well, put into it say 4 gallons alcohol. If the can containing the alcohol is set into a wash tub with a little ice and salt around it so as to chill the alcohol a better result will be secured than if the alcohol is at an ordinary temperature. Melt the pomade with very gentle heat—this can be done by setting can into warm water. Then carry the melted grease to a considerable hight. If you are in a two story building you may bore a hole in the upper floor to put funnel through and set can with cold alcohol on floor below. Then the melted pomade which should be about the consistency of molasses is poured into alcohol from the floor above. This is the principle of the shot tower. In its passage down, the pomade is formed into globules and, hardened by the cold alcohol, they are prevented from cohering in a mass. The pomade in alcohol may then be kept at ordinary temperature for about six weeks, stirred gently every few days after which the alcohol is poured or rather strained or filtered. The alcohol now contains the flower odor and is known to perfumers as pomade washings. The grease may be treated by pouring on fresh alcohol enough to cover it, stirred occasionally for 2 or 3 weeks—this gives what is called second washing. The grease so exhausted is sold to soap makers. But the pomade washings are not yet finished, the alcohol takes up a certain amount of the grease and if this were not chilled out it would ruin your handkerchief.

Extracts: Winter is the best time to chill pomade washings. They may be set out doors over night in the coldest weather and filtered in a very cold place. This takes out the grease

and they are then ready to be used in the manufacture of perfumery.

Ylang Ylang Extract

Tincture of Cassia....2 pts.
Tincture of Jasmine....2 pts.
Oil of Rose....1 dr.
Oil of Orange, sweet....1 dr.
Oil of Bergamot....2 drs.
Oil of Hyacinth with Jonquil....1 dr.
Glycerine....6 ozs.
Spirits to make....1 gal.

Lily of the Valley

Concrete Lily of the Valley....¾ ozs.
Glycerine....6 ozs.
Spirits to make....1 gal.

Stuart Bouquet

Otto Rose....¼ oz.
Oil of Sandalwood....½ dr.
Oil of Bergamot....½ oz.
Tincture of Cassia....8 ozs.
Vanillin....1 dr.
Tincture of Musk....1 oz.
Glycerine....6 ozs.
Spirits to make....1 gal.

Frangipanni

Otto Rose....¼ oz.
Oil of Sandalwood....½ oz.
Oil of Bergamot....½ oz.
Oil of Orange, sweet....¼ oz.
Vanillin....1 dr.
Coumarin....1 dr.
Glycerine....6 ozs.
Spirits to make....1 gal.
Color, Golden Yellow.

Carnation Pink

Cologne Spirits....4 pts.
Oil of Terpineol....3 ozs.
Vanillin....2 drs.
Oil of Cloves....1 dr.
Oeillet....1 oz.
Glycerine....8 ozs.
Spirits to make....1 gal.
Color, Golden.

Oriental Bouquet

Tuberose....2 pts.
Oil of Rose Geranium....3 drs.
Oil of Sandalwood....3 drs.
Oil of Bergamot....2 drs.
Oil of Cassie....2 drs.
Coumarin....1 dr.
Glycerine....6 ozs.
Spirits to make....1 gal.
Color, Olive.

White Lilac

Oil of Terpineol....3 ozs.
Hyacinth Geraniol....1 dr.
Tincture of Jasamine....8 ozs.
Tincture of Orange....8 ozs.
Vanillin....1 dr.
Coumarin....1 dr.
Tincture of Civette....1 oz.
Glycerine....6 ozs.
Spirits to make....1 gal.
Color, Heliotrope.

Heliotrope

Heliotropin....1 oz.
Coumarin....2 drs.
Vanillin....1 dr.
Bergamot....1 dr.
Oil of Sandal....1 dr.
Hyacinth Geraniol....1 dr.
Oil of Bitter Almonds....5 drops
Oil of Cloves....10 drops
Glycerine....6 ozs.
Spirits to make....1 gal.
Color, Heliotrope.

White Rose

Oil of Rose Coned....¼ oz.
Oil of Rose Geranium....¼ oz.
Oil of Bergamont....⅛ oz.
Oil of Patchouli....20 drops
Vanillin....⅛ oz.
Coumarin....⅛ oz.
Glycerine....6 ozs.
Colonge Spirit to make....1 gal.

Crabapple

Oil of Terpineol....1 oz.
Oil of Bois de Rose....1 oz.
Hyacinth with Jonquil....⅛ oz.
Vanillin....⅛ oz.
Coumarin....⅛ oz.
Glycerine....6 ozs.
Spirits to make....1 gal.
Color, Olive.

Jockey Club

Tincture of Jasmine....16 ozs.
Tincture of Orange....12 ozs.
Tincture of Rose....12 ozs.
Tincture of Cassie....6 ozs.
Coumarin....½ dr.
Tincture of Civette....4 ozs.
Tincture of Vanilla....1 oz.

Otto Rose.....1 dr.
Glycerine.....6 ozs.
Colonge Spirits.....64 ozs.
Water.....8 ozs.
Color, Light Brown.

Hyacinth

Terpineol.....1 oz.
Hyacinth with Jonquil.....1 oz.
Glycerine.....8 oz.
Spirits to make.....1 gal.
Color, Light.

Rose Geranium

Oil of Rose Geranium.....1½ ozs.
Oil of Sandalwood.....¼ oz.
Oil of Bergamot.....¼ oz.
Coumarin.....2 drs.
Glycerine.....6 ozs.
Colonge Spirits to make.....1 gal.
Color, Pale Green.

Violet

Tincture of Cassie.....32 ozs.
Tincture of Violet.....8 ozs.
(2 ounces to gallon)
Glycerine.....6 ozs.
Vanillin.....1 dr.
Coumarin.....1½ dr.
Tincture of Civette.....4 ozs.
Oil of Mugnet.....½ dr.
Oil of Sandalwood.....1½ drs.
Glycerine.....6 ozs.
Colonge Spirits to make.....1 gal.
Color, Olive.

Jasmine Extract

Tincture of Jasmine.....2 pts.
Tincture of Orange.....12 ozs.
Tincture of Cassie.....4 ozs.
Spirits.....4 pts.
Vanillin.....1 dr.
Glycerine.....8 ozs.
Coumarin.....1 dr.
Spirits to make.....1 gal.

Orange Blossom

Tincture of Orange.....2 pts.
Spirits.....4 pts.
Oil of Sweet Orange.....1 dr.
Oil of Neroli.....2 drs.
Coumarin.....2 drs.
Glycerine.....6 ozs.
Spirits to make.....1 gal.
Color, Pale Yellow.

New Mown Hay

Tincture of Cassie.....1 pt.
Tincture of Orris.....1 pt.
Spirits.....4 pts.
Oil of Sandalwood.....30 drops
Oil of Cloves.....15 drops
Oil of Neroli.....30 drops
Oil of Rose Geranium.....60 drops
Coumarin.....½ oz.
Glycerine.....8 ozs.
Colonge Spirits to make.....1 gal.
Color, Reddish Brown.

Syntols or Concentrated Perfumes

One pint of syntol to 7 pints of colonge spirits.

White Rose

Concd. 1 to 7

Oil of Rose.....½ oz.
Conct. Rose.....½ oz.
Conct. Jasamine.....¼ oz.
Tincture of Cassie.....7 ozs.
Oil of Sandal.....2 drs.
Oil of Patchonli.....15 drops
Colonge Spirits to make.....16 ozs.

Arcadian Pink

Concd. 1 to 7

Oil of Terpineol.....2 ozs.
Oil of Cloves.....½ oz.
Oil of Mugnet.....½ oz.
Oil of Boise de Rose.....½ oz.
Tincture of Musk.....2 ozs.
Tincture of Rose.....4 ozs.
Oeillet.....½ oz.
Vanillin.....2 drs.
Colonge Spirits to make.....16 ozs.

Persian Pink

(Concd. 1 to 7)

Oil of Bergamot.....3 drs.
Oil of Lemon.....4 drs.
Oil of Lavender.....1½ drs.
Oil of Rose Geranium.....1 dr.
Oil of Cloves.....45 drops
Oil of Cinnamon.....1¼ drs.
Tincture of Musk.....2 ozs.
Spirit to make.....1 pt.

Olive of Vanilla

(Concd.)

Vanillin.....7½ drs.
Coumarin.....½ dr.
Colonge Spirits.....8 oz.

Lilac

(Concd. 1 to 7)

Tincture of Jasmine.....8 oz.

Tincture of Orange.....1 oz.
Tincture of Vanilla, 4 to gal.....4 ozs.
Tincture of Civette.....1 oz.
Oil Rose Geranium (Bruno Court).½ oz.
Oil of Mugnet.....2 ozs.
Oil of Terpineol.....1 oz.

Crabapple

(Concd. 1 to 7)

Tincture of Tuberose.....8 ozs.
Tincture of Violet, 1 to 8.....2 ozs.
Tincture of Musk.....4 ozs.
Oil of Terpineol.....1 oz.
Oil of Bois de Rose.....½ oz.
Oil of Hyacinth, Geraniol.....½ oz.

May Lily

(Concd. 1 to 7)

Lily Concd.....1 oz.
Colonge Spirits.....15 ozs.

Heliotrope

(Concd. 1 to 7)

Heliotrope.....1 oz.
Coumarin.....2 drs.
Oil of Bergamot.....1 dr.
Oil of Sandalwood.....1 dr.
Oil of Hyacinth, Geraniol.....2 drs.
Oil of Bitter Almond.....5 drops
Oil of Cloves.....10 drops
Colonge Spirits to make.....16 ozs.

Violet

(Concd. 1 to 7)

Violet, Concd.....1 oz.
Tincture of Cassia.....8 ozs.
Tincture of Rose.....5 ozs.
Tincture of Civette.....2 ozs.
Oil of Sandalwood.....10 drops
Vanillin (De Laires).....½ dr.
Coumarin.....½ dr.

Rose Geranium

(Concd. 1 to 7)

Oil of Rose Geranium.....1½ oz.
Oil of Sandalwood.....¼ oz.
Tincture of Rose to make.....16 oz.

To make the tincture or washings from concrete essence, take one ounce of the latter, warm it by placing the container in warm water, then pour it into 1 gallon of warm colonge spirits. Do not warm the concrete essence nor the colonge spirits to more than one hundred Shake well and you have a gallon of fine washings or tincture. To make tincture of vanilla for perfumery purposes, use 4 ounces of vanillin to 1 gallon of colonge spirits.

To make other tinctures would refer you to Griffith's Formula book. I would advise all to procure a copy of this book, as it is valuable—price $5.00. Remit to Sioux Publishing Co., Sutherland, Iowa.

The cost to make the above perfumes (not the concentrate) will be about $4.50 to $5.00 per gallon and it is claimed will produce a very fine perfume.

Crabapple

Tuberose.....32 ozs.
Violet xx.....16 ozs.
Oil of Mugnet.....½ dr.
Hyacinth Geraniol.....1½ ozs.
Tincture of Musk.....4 ozs.

Violet x x

Vizone.....1 oz.
Rose from Concretes.....24 ozs.
Cassia from Concretes.....24 ozs.
Coumarin.....2 drs.
Vanillin.....1 dr.
Tincture of Civette.....4 ozs.
Colonge Spirits to make.....1 gal.
Green Color q. s.

Violet x x x

Is made same as the X X Violet only you should double the Viozone, Cassia, Coumarin, Rose and Vanillin to Cologne Spirits, one gallon.

Viozone is sold by Ungerer & Co., 18 Cedar St., New York City.

Hyacinth Geraniol is sold by Fritzsche Bros., 37 Barclay St., New York City.

Carnation Pink

Tinct. Rose.....4 pints
Jasmin.....4 pints
Oil Lilac.....1 dram
Heliotropol.....1 dram
Oeillet.....1 ounce
Oil Bergamot.....1 dram
Oil Cloves.....1 dram

This makes a fine product.

The Heliotropal, Oeillet, Oil Lilac may be bought from Ungerer & Co., 18 Cedar St., New York City.

Bouquet Perfumery

½ oz. Oil of Lavender.
½ oz. Oil of Santal.
16 ozs. Alcohol.

Shake all together with one ounce magnesia and then filter. It is easily made and not expensive.

Perfume Packet

Lavender Flowers.....8 ozs.
Rose Petals.....8 ozs.
Ground Orris.....2 ozs.
Ground Benzoin.....1 oz.
Ottar Rose.....10 drops
Oil Sandalwood.....10 drops
Lavender Water.....2 drops

Mix the solids, dissolve the oils in the Lavender water and spray over the solids, turning the latter over constantly. Put up in packets for sale.

Cream for Chapped Hands

Gum Tragacanth.....3 ozs.
Boiling water.....4 pts.

Rub smooth and let stand till cold

Glycerine.....4 pts.
Chlorate of Potash pwd.....8 ozs.
Oil Rosemary.....5 drops
Oil Cassie.....5 drops
Oenanthic Ether.....5 drops

Drop the oils into the glycerine and rub smoothly.

If found too thick, dilute with distilled water, strain through cheese cloth without pressing.

Embalming Fluid

Wickersheimer's preserving fluid. The following is the formula for this fluid for injecting:

Arsenious acid.....16 grm.
Sodium Chloride.....80 grm.
Potassium Sulphate.....200 grm.
Potassium Nitrate.....25 grm.
Potassium Carbonate.....10 grm.
Water.....20 lit.
Glycerine.....4 lit.
Formaline Sol. 40 degree.....¾ lit.

Hager suggests the following as a substitute for Wickersheimer's preparation:

Salicylic Acid.....4 drm.
Boracic Acid.....5 drm.
Potassium Carbonate.....1 drm.
Dissolve in hot water.....12½ ozs.
Glycerine.....5 ozs.

Tnen add:

Oil Cinnamon, Oil Cloves, each 3 drm.
dissolve in Alcohol.....12½ ozs.

The latter fluid is not poisonous, and posseses the desirable property of acting as an anticeptic, and also as a preventative and exterminator of moths and vermin, and is possessed of a pleasant odor. The borosalicylate may be used in connection with other solvents if desired.

Salad Dressing

Salt.....1½ ozs.
Sugar.....1 oz.
Salad Oil.....2 ozs.

Eggs.....2 ozs.
Acamulsia.....1 oz.
[Emulsify and add]
Tr. Capsicum.....20 drops
Mustard.....1½ ozs.
Malt Vinegar.....6 ozs.
Mix.

Creme Dentifrice

Precipitated Chalk.....22 ozs.
Powd. Castile Soap.....4 ozs.
Powd. Orris Root.....6 ozs.
Oil Eucalyptus.....1 dram.
Oil Peppermint.....20 drops.
Oil Cinnamon.....20 drops.
{ Saccharin.....15 grains.
} dissolved in Alcohol.....1 oz.
Color, pale pink q. s. or.....1 oz.
{ Glycerine.....11 ozs.
} Water.....3 ozs.
q. s. to make a thick paste.

Egg Shampoo

Transparent Castile Soap.....½ oz.
Saffron.....½ dram.
Water a sufficiency.

Shave the soap fine and boil it and the saffron in a quart of water.

When the soap is dissolved strain and add when cold the following solution:

Oil Lavender.....40 minims
Oil Cloves.....10 minims
Otto of Rose.....15 minims
Oil of Bergamot.....15 minims
Essence of Musk.....1 dram
Rectified spirits.....20 ozs.

Make up the julep to one gallon with water.

The following is a formula of a coffee cereal which is put out by a large manufacturing concern:

You may give it any fancy name you desire.

Take:

3½ quarts of bran.
1½ quarts of corn meal.
1 pint New Orleans molasses.
1 cup of hot water.

Mix thoroughly and brown as dark as coffee.

Bug Annihilator

Gasoline.....1 pt.
Napthaline.....1 oz.

Dissolve. Color with aniline red soluble in oil or Alkanet root. Be careful and keep away from the fire.

Blue Black Ink

Gallic Acid.....2 ozs.
Sulphate of Iron.....3½ ozs.
Aniline Blue.....1 drm.
Water.....10 pts.

Dissolve the acid in 5 pints of the water by gentle heat. Dissolve the iron in a quart of the water and add it to the acid solution, stirring well. Lastly add the aniline dissolved in the remaining 3 pints of hot water and mix all together. This makes a high class and yet cheap ink that is good enough for the best class of trade.

Silver and Glass Cleaner

Precipitated Chalk.....6 ozs.
Wood Alcohol.....8 ozs.
Amonia Water.....3 pts.

Mix together and shake well.

Directions: Shake the bottle and moisten a clean woolen cloth with the liquid. Apply to the silver or glass to be cleaned and finish off with a dry chamois or woolen cloth. This is usually put up in wide 4 ounce bottles and retails for 25 cents.

Buggy Top Enamel

Orange Shellac.....3 ozs.
Castor Oil.....1 dr.
Venice Turpentine.....1 dr.
Gum Sanderac.....1 dr.
Nigrosine.....50 grs.
Wood Alcohol.....1 pt.

Crush the shellac and sanderac small and dissolve in the alcohol, add other ingredients and shake well. The directions are to apply the enamel with a soft camel's hair brush. This put up in 3 ounce bottles to sell for 25 cents, and will show a good profit and sell well.

Aerated Lemon

Without a bottling machine, mix 1½ drams oil of lemon with 1 pound of powdered sugar. Put in each half pint bottle ¾ ounce of this lemon sugar with ½ dram of washing soda. Fill up with water, find a cork to fit, and slip in quickly 1 dram of Crystal Tartaric Acid and cork very quickly before the acid has time to dissolve. Tie or wire the corks down and lay the bottles on their sides. After standing an hour they will open as briskly as champagne.

Black Satin for Leather

Extract of Logwood.....3 ozs.
Ivory Black.....¾ oz.
Glycerine.....½ oz.
Bichromate of Potash.....12 grains
Copperas.....12 grains
Water.....½ gallon

Boil all together. As well as being efficient this is also cheap and can be put up in 3 ounce bottles to retail for 15c and show a good profit. It is largely used for turning tan shoes black. Directions are to apply with a sponge or soft brush, giving a second coat if necessary.

BAKING POWDERS

There are several kinds of Baking Powder on the market and it is only a question of what price you care to make it. I will give you a number of formulas so you may take your choice.

No. 1

Equal in purity and strength to any Baking Powder on the market:

Pure Grape Cream of Tartar.....3 lbs.
Soda Bicorbonate (baking soda)..1½ lbs.
Corn Starch.....1½ lbs.
Tartaric Acid.....1 oz.
Powdered Carbonate Ammonia.2 drams.

Use two teaspoonfuls to one quart flour.

Formula No. 2

This powder is equal to some of the highest priced baking powders in the market. Costs about 10c per pound.

Pure Grape Cream of Tartar.....1¾ lbs.
Soda Bicarbonate.....1 lb.
Corn Starch.....2 lbs.
Tartaric Acid .....3 ozs.
Squibbs Powdered Carbonate Ammonia.....1 dram.

Use two teaspoonsful to one quart of flour.

Farmula No. 3

This is a very fine cheap baking powder. Costs about 7c per pound:

Pure Grape Cream of Tartar.....½ lb.
Cream of Tartar Substitute.....1 lb.
Soda Bicorbonate .....1½ lbs.
Acid Phosphate of Lime..... ....1 lb.
Corn Starch.....2½ lbs.

Use two teaspoonfuls to one quart of flour.

Formula No. 4

A very good baking powder, especially when you desire to make one at a cheap price. Costs about 3 cents per pound.

Cream of Tartar Substitute.....1½ lbs.
Soda Bircarbonate.....1½ lbs.
Acid Phosphate of Lime.....1½ lbs.
Corn Starch.....3 lbs.

Mix thoroughly. Use two teaspoonsful to one quart flour. All above formulas must be mixed thoroughly and dry. Cream of tartar has about 15 per cent moisture, it should not contain over 5 to 7 per cent moisture or the baking powder will bake.

Formula No. 5

A cheap baking powder without alum.

Acid Sulphate of Potash.....6 ozs.
Soda Bicarbonate.....8 ozs.
Corn Starch.....16 ozs.

Mix well.

Formula No. 6

A fine cream tartar baking powder, costs about 10 to 12 cents per pound.

Cream of Tartar.....2½ lbs.
Bicarb. of Soda.....1 lb.
Starch .....1½ lb.

Mix thoroughly.

Formula No. 7

The following is a formula for alum baking powder.

25 lbs. C. I. S. (burnt alum pwd.)
25 lbs. B. C. S. Bicarb. soda granulated.
50 lbs. Powdered Starch.
1 to 2 ozs. Egg Albumen.

To make a 14 per cent Alum and Phosphate powder.

Take

100 lbs. C. I. S. (burnt alum.)

62½ lbs. Phosphate, granulated is best but is more expensive—besides the Rumford people claim this is their process—the other does very well.

116¼ lbs. B. C. Soda.
136¼ lbs. Starch (filler).
1 lb. Egg Albumen.

This will make a powder very strong—you might add starch enough to make 500 lbs. and then have a good powder equal to —— make.

The Rumford people are making a phosphate powder which is giving very good satisfaction, but they are bringing suit against other manufacturers who are imitating their product. The great trouble with a phosphate baking powder is that it will not keep. By using a granulated, that is to say coarsely powdered phosphate and also a granulated soda the difficulty is in some measure overcome; but the Rumford people claim that this is their method and that any one using it infringes on them, etc. The writer does not know the outcome of it.

Egg Powder

Egg albumen, that is the whites of eggs, is imported in large quantities mostly from Russia and powdered in this country. It is a regular article of

commerce. Powdered egg albumen may be bought from A. Klipstein & Co., 122 Pearl St., New York, or from any dealer in this line. It costs 75 to 80 cents per pound in 5 and 10 pound lots—the price fluctuates.

It may be put into any kind of baking powder, and I think when the article is good and fresh and dry, etc., it is some improvement to any baking powder it is put into. It is mostly used in the cheaper powders and causes them to show to much better advantage than they otherwise would in what is called the gloss test. One ounce to 100 pounds will make quite a difference. I think it may be better to use 2 or 3 ounces to 100 pounds—some use a good deal more than that but it is quite unnecessary. Do not go more than 4 ounces to 100 pounds at most. Try 1 or 2 ounces to 100 pounds.

The following baking powder formulas are taken from Griffith's Non-Secret Formulas. By all means you should have this book and an order will be filled by the Sioux Publishing Co., Sutherland, Iowa. Price, $5.00 per copy. The book contains 513 large pages, elegantly bound and contains a great deal of good information. The writer cannot recommend the book too highly.

General Directions for Mixing Baking Powder

The ingredients should be sifted separately into a mixing trough; sift the starch or flour first; then the acid, mix well and then sift the soda, mix well again, using preferably a flat wooden paddle. Then put the powders into a mixing machine; or sift them well at least three times so as to ensure thorough mixing; be careful to have all your materials quite dry; moisture is detrimental to the keeping proprieties of all baking powders, especially those made with tartaric acid or cream of tartar. The starch in baking powders tends to preserve the quality unimpaired by preventing the acids from attacking the soda.

Alum Baking Powder

One Spoon

Burnt Alum (powdered).....16 pounds
Soda Bicarbonate.....17 pounds
Starch (powdered).....25 pounds

Alum Baking Powder

Two Spoons

Burnt Alum (powdered).....16 pounds
Soda Bicarb.....17 pounds
Starch (powdered).....50 pounds

Phosphate Baking Powder

One Spoon

Acid Phosphate of Calcium...20 pounds
Burnt Alum.....20 pounds
Soda Bicarbonate.....29 pounds
Starch (powdered)..... 60 pounds

Slow Rising Cream Tartar Baking Powder

Two Spoons.

Cream of Tartar.....8 lbs.
Soda Bicrab.....6 lbs.
Starch (powdered) ....14 lbs.
Mix.

Quick Rising Baking Powder

Two Spoons.

Tartaric Acid.....15 lbs.
Soda Bicarb.....17 lbs.
Starch (powdered).....64 lbs.
Mix well.

Self Rising Baking Powder

Two Spoons.

Tartaric Acid..... .....5 lbs.
Soda Bicarb.....6 lbs.
White Sugar (powdered).....4 lbs.
Dried powdered Salt..... ....4 lbs.
Magnesia Carb. light.....½ lb.
Starch powdered.....8 lbs.
Mix well.

The following formula is from an analysis which has been made of one of the leading brands on the market:

	Per cent.
Ammonium aluminum sulphate (burnt alum).....	20.16
Phosphate..... ...	8.15
Soda bicarbonate..	18.35
Starch (commercial).....	53.34
	100.00

It wholesales for two dollars per dozen and retails at twenty-five cents per can and as you see will leave a very *good margin* to the manufacturer.

Baking Powder

We give below the analysis of a number of baking powders which are now on the market, they are first class sellers, and will give good satisfaction. Although about every jobber and retailer in the U. S. are handling these goods, we prefer not to mention the manufacturers name. An analysis of article No. 1 contained;

Phosphate	7.73
Sodium Aluminum (burnt alum).	21.73
Bicarb. Soda	24.81
Starch	45.73
	100.00

Sample marked No. 2 proved to be the following:

Phosphate	8.15
Ammonium Aluminum Sulphate (burnt alum)	20.16
Soda Bicarbonate	18.35
Starch (commercial)	53.34
	100.00

The above two samples are about the same in cost and effect, though they sell by the manufacturer at over $1.00 per dozen difference in the price. Some states have no food law and it would not be necessary to pay any attention to the label, but in those states where the food law is in effect, you may be compelled to label "*This can of Powder Contains Alum.*" You may obtain a copy of the food law of any state by applying to the State Food Commissioner.

Sample of article No. 3 turned out to be what is called an "alum phosphate baking powder;" not much difference in the three formulas, but you will notice the posphate has been reduced. The manufacturer who sold this put it out under the name of "Leader," and retailing at 10 cents per can and at 75 cents per dozen wholesale.

Phosphate	6.90
Sodium Aluminum Sulphate (burnt alum)	19.87
Bicarbonate of Soda	24.73
Starch	48.50
	100.00

This formula at 75 cents per dozen is nearly as good powder as the one selling at $2.00 per dozen as given in formula No. 2.

Sample No. 4 is as follows:

Phosphate	26.03
Sodium Aluminum Sulphate (burnt alum)	26.24
Bicarbonate of Soda	22.55
Starch	25.18
	100.00

You will notice the phosphate has been increased to 26 per cent in the above This powder retails at 25 cents per can.

Sample No. 5 is as follows:

Burnt Alum (Sodium Aluminum Sulphate)	21.99
Phosphate	12.06
Albumen	0.07
Sodium Bicarbonate	26.55
Starch	39.33

Jobs at $2.00 per dozen and retails at 25 cents per can. The firm who manufactures this article put out more baking powder than any firm in the U. S. outside of the baking powder trust.

Albumen is a commercial product and may be obtained from any of the supply dealers.

Sample No. 6:

Sodium Aluminum Sulphate (burnt alum)	19.15
Phosphate	14.93
Soda Bicarbonate	27.70
Starch (commercial)	38.22
	100.00

Sample No. 7 is as follows:

Calcium Acid Phosphate	11.17
Sodium Aluminum Phosphate (burnt alum)	18.25
Soda Bicarbonate	25.00
Starch (commercial)	45.58
Albumen	Trace
	100.00

Sample No. 8 is as follows and you will notice that it is strictly alum powder:

Sodium Aluminum Sulphate (burnt alum)	21.93
Starch (commercial)	55.90
Bicarbonate of Soda	22.17
	100.00

Sample No. 9. Analysis of No. 9 proves to be:

Sodium Aluminum Sulphate (burnt alum)	28.97
Phsophate	12.82
Bicarbonate of Soda	22.09
Starch (commercial)	36.12

While these formulas run about the same in composition, you may wonder why we give so many when one or two would do. We do this simply to show you what other manufacturers are doing and what you have got to do to meet competition.

Baking Powder

Acid phosphate of soda is admirably adopted for mixing with the ordinary phosphate of lime, as a substitute for the granular phosphate of lime, in making baking powder free from alum. It is considerably stronger in acid than either cream of tartar or acid phosphate of lime, the ration being as follows: 100 lbs. Acid Phosphate of Soda neutralizes 75 lbs. Bi-Carbonate of Soda; 100 lbs. Cream of Tartar neutralizes 45 lbs. of Bi-Carbonate Soda; 100 lbs. Acid Phosphate of Lime neutralizes 45 lbs. Bicarbonate of Soda.

In mixing acid phosphate of soda and acid phosphate of lime together the best results are obtained in using them in about equal quantities. The following formulas show approximately the relative cost of baking powder manufactured from granular phosphate of lime and from a mixture of acid phosphate of soda and ordinary acid phosphate of lime. Each powder tests 13 per cent of Carbonic Acid Gas.

50 lbs. Granular Acid Phosphate Lime.
25 lbs. Granular Bi-Carbonate Soda.
25 lbs. Corn Starch.

This will cost $5.25 per 100 pounds.

20 lbs. Acid Phosphate of Soda.
20 lbs. Acid Phosphate of Lime.
25 lbs. Granular Bi-Carbonate of Soda.
35 lbs. Corn Starch.

Cost per 100 pounds, $5.54.

In the above formula use granular soda in place of fine soda at an extra cost of ten cents per hundred. This is not essential, though it makes a better keeping powder. Special pains should be taken to use acid phosphate of lime that does not contain free acid, as free acid endangers the keeping qualities.

To insure best results the starch and soda should be kept in a drying room at a temperature of about 130 for three or four days before mixing. In damp or muggy weather it is also desirable that the acid phosphate of lime and acid phosphate of soda should be kept dry while being prepared. Its action is a little slower than Cream of Tartar.

Self Rising Flour

Cream of Tartar.....10 ozs.
Soda Bicarb .....6 ozs.
Best flour.....100 lbs.

Mix well.

It is not necessary to say anything more now regarding baking powder, as you may get up any price baking powder you may desire.

Fruit Juice Syrup

Select fruit should be used and all damaged particles removed, as decayed matter will spoil the product besides giving it a bad flavor. Press the juice out of the fresh fruit, strain and add to each gallon of juice a half pint of the strongest cologne spirits in which two drams of salicylic acid is dissolved, or if cologne spirits cannot be easily obtained, a good quality of alcohol may be used, set aside for twenty four hours to allow the pectin to precipitate, decant the clear juice and filter the sediment. Into each gallon of fruit juice dissolve by bringing to a boil 10 pounds of the best granulated sugar, set aside and cool, skim and bottle.

If desirable, a small amount of artificial flavor may be added, but the pure

fruit should give better satisfaction, a small quantity of citric acid or tartaric acid may be added to accentuate the flavor.

In boiling fruit juice, well enameled whiteware or clean copper kettles should be used.

Soda Fountain Syrups

There is good money in making soda fountain syrups and they are very easy made. A good strong A No. 1 vanilla syrup can be made as low as 25 cents per gallon and will give the best satisfaction.

To Make Simple Syrup

To make syrup, pour ½ gallon boiling water on 8 pounds granulated sugar—this makes 1 gallon finished syrup, to which add glucose in any proportion you may see fit. Flavor vanilla syrup with 2 ounces good vanilla extract (from vanillin; you will not need the coumarin) per gallon. Directions are given how to prepare a good vanillin extract on an another page. Other syrups same way except that for orange and lemon you should have soluble extracts, which are best made from the terpineless oil. There are formulas given here so you will have no trouble. Flavor other syrups same as vanilla, perhaps some not quite so much, and then you may use gum foam about 1 ounce to 1 gallon. For instance:

Vanilla

Simple Syrup.....1 gal.
Extract Vanilla.....2 ozs.
Gum Foam.....1 oz.
Fruit Acid.....¼ oz.
Color with caramel.

Florida Orange

Simple syrup.....1 gal.
Extract Orange.....2½ ozs.
Fruit acid.....¾ oz.
Gum Foam.....1 oz.
Color slightly with curcuma.

Ginger Ale

Simple syrup.....1 gal.
Ginger Ale extract.....6 ozs.
Fruit Acid.....1 oz.
Caramel (brown sugar).....1 dr.

Lemon

Simple Syrup.....1 gal.
Extract Lemon.....2 ozs.
Gum Foam.....1 oz.
Fruit Acid.....1 oz.
Color with Curcuma.

Peach

Simple Syrup.....1 gal.
Peach Juice.....1 pt.
Gum Foam.....1 oz.
Fruit Acid.....1 oz.

Pear

Simple Syrup.....1 gal.
Pear Extract.....2¼ ozs.
Gum Foam.....1 oz
Fruit Acid.....½ oz.

Almond

Simple Syrup.....1 gal.
Extract Bitter Almond.....1 oz.
Fruit Acid.....1 oz.

Sarsaparilla

Simple Syrup.....1 gal.
Extract Sarsaparilla.....1 oz.
Gum Foam.....1 oz.
Caramel to color.

To Make Simple Syrup

This makes a fine syrup at a cost of 30c per gallon. The cost may be reduced by adding glucose.

To make simple syrup use 6 lbs. granulated sugar and enough filtered water to make a gallon, and make by the cold process and strain through cheese cloth. It will require about 3 pints of water to the gallon.

Coffee Formulas

For Mixing.

The following coffees are used in the production of the blends which are hereafter described: Good Rio, Good Santos, Golden Santos, Choice *Mocha Seed* Santos, Good Maracaibo, Choice Peaberry, Extra Peaberry, Caracas, Genuine Arabian Mocha, Genuine Old Government Java. Mix each lot thoroughly.

If you do your own roasting, it will be best to mix before roasting.

No. 1.—Good Rio, 50 per cent; Good Santos, 50 per cent. It will cost the retailer about 11c and sells readily for 20c. It makes a strong yet fine coffee.

No. 2.—Choice Mocha Seed Santos, 33⅓ per cent; Good Maracaibo, 66⅔ per cent. This costs the retail dealer about 12½c and sells for 25c.

No. 3.—Golden Santos, 50 per cent; Choice Mocho Seed Santos, 50 per cent. This will cost retail dealer about 13c and sells for 26c.

No. 4.—Good Rio, 33⅓ per cent; Choice Santos, 33⅓ per cent and Choice Peaberry, 33⅓ per cent. Cost retail dealer about 14c and sells for 25 to 28c.

No. 5.—Good Maracaibo, 75 per cent; Genuine Mocha, 25 per cent. Costs retailer 15c and sells for 30c. It is a fine drink, and by some would be called Mocha and Java.

No. 6.—Choice Santos, 40 per cent; Good Maracaibo, 40 per cent; Genuine Mocha, 20 per cent. Costs retailer 15c and sells for 30c.

No. 7.—Choice Santos, 50 per cent; Choice Peaberry, 50 per cent. Costs retail dealer about 15½c and sells for 30c.

No. 8.—Good Maracaibo, 66⅔ per cent; Choice Peaberry, 16⅔ per cent; Extra Peaberry, 16⅔ per cent. Costs retailer about 14c and sells for 30c.

No. 9.—Golden Santos, 25 per cent; Caracas, 75 per cent. Costs retailer 16c; sells for 33c.

No. 10. Golden Santos, 66⅔ per cent; Mocha, 33⅓ per cent. Cost retail dealer about 17c and sells for 35c.

No. 11.—Golden Santos, 33⅓ per cent; Choice Peaberry, 33⅓ per cent; Old Government Java, 33⅓ per cent. Costs retailer about 18c and sells for 35c.

No. 12.—Golden Santos, 33⅓ per cent; Mocha, 33⅓ per cent; O. G. Java, 33⅓ per cent. Costs retail dealer about 21c and sells for 40 to 45c.

No. 13.—Choice Mocha Seed Santos, 20 per cent; Mocha, 20 per cent; O. G. Java, 60 per cent. Cost retailer about 22c and sells for 40 to 45c.

No. 14.—Mocha, 33⅓ per cent; O. G. Java, 66⅔ per cent. Cost retailer about 24c and sells for 45c. The only genuine Mocha and Java, and a fine one.

No. 15.—Good African Java, 50 per cent; Choice Santos, 50 per cent. Cost retailer about 12c and sells readily for 25c.

No. 16.—Fancy African Java, 50 per cent; Choice Peaberry, 50 per cent. Cost retailer about 15c and sells for 30 to 35c.

No. 17.—African Java, 50 per cent; Golden Santos, 25 per cent; Extra Peaberry, 25 per cent. Cost retailer about 15c, sell for 30c.

To Increase the Weight of Coffee

The roasted beans are plunged in a 5 per cent solution of borax and then let dry. The borax makes them shine and absorbs water, thus adding to the weight of coffee. The way to distinguish this adulteration is to dry the coffee, and if it looses over 4 per cent in weight there has been a fraudulent absorption of water.

Cereal Coffee

This formula, only it is given in a small amount, is used by one of the largest concerns in the U. S. Mix up a small amount and try it.

3½ Quarts of Bran.
1½ Quarts of Corn Meal
1 Pint of New Orleans Molasses.
1 cup of Hot Water.

Mix thoroughly and brown as dark as coffee.

Cereal Coffee

No. 2.

Rye ..... 12 lbs.
Horse Beans ..... 1 lb.

Roast in a big open pan over a quick fire, greasing the pan with butter. When

roasted, cool and grind in a coffee mill with ¼ pound of cassia buds. Mix 1 pound of ground chicory with the ground cereal coffee and it is ready for use in place of the ordinary coffee.

Tea Fortifier and Improver

Baking Soda.....½ lb.
Powdered Borax.....½ oz.
Otto of Roses.....5 drops

Mix thoroughly. Use as much of the powder as will lay on a dime to a teapot holding six cups of tea. Wrap in waxed paper for sale. This will make a poor tea good.

Coffeeline

Coffeline, or "coffee essence" is made as follows:

Best Ground Coffee.....6 lbs.
Best Ground Chicory.....3 lbs.

Boil gently in a covered sauce pan with 3 gallons of water, and when cold strain and press thoroughly, and add enough water to make 3 gallons of the extract. To this add:

Pure Alcohol.....¾ pt.
Pure Glycerine.....24 fl. ozs.

And enough simple syrup to make 6 gallons. Mix thoroughly and put up in bottles holding one pint.

Directions for use: Use 1 tablespoonful to a cup of boiling water, little hot milk or cream may be added if desised. Simple syrup is made by dissolving 10 pounds of lump sugar in 2 gallons of water by as gentle a heat as possible, then strain. Chicory neutralizes the bad effects of coffee, improves the flavor, imparts to it wholesome and beneficial qualities, and renders it perfectly harmless to old and young.

Fire Extinguisher Powder

A superior fire extinguisher powder is made as follows and there is plenty of money in it.

Take:

Common Salt.....8 lbs.
Sodium Bicarbonate.....6 lbs.
Glauber's Salt.....2 lbs.
Calcium Chloride.....2 lbs.
Sodium Silicate.....2 lbs.

Mix thoroughly and pack in tin tubes about twenty inches long and two inches in diameter. The tubes should be closed at one end and be provided with a screw cap on the other. To extinguish a fire, remove the cap and scatter the contents of the tube on the flame. When the powder comes in contact with the fire it generates a gas which smothers the flame. The extinguisher retails for $3.00 but can be made for a few cents. The usual wholesale price is $12.00 per dozen.

Vinegar

To produce a vinegar at about 3 cents per gallon, 40 to 45 grains and that which will keep pickles, write to Messrs. Kelso & Co., Chicago, Ill., and request them to send you a sample of their "Vinegar Essence" and instructions for making the vinegar and you will be able to turn out vinegar in any quantity.

Egg Preserving

1 qt. Waterglass.
10 qts. Water.

Waterglass is a thick syrup and costs at wholesale about 1¾ cents per pound in carboy lots. The retail price varies, sometimes as high as 10c per pound is charged. If the waterglass powder is used, then less amount is required. Pure water only should be used and it should be boiled and allowed to cool before using it. They should be packed in clean barrels and stored where it is cool. If placed where it is too warm, silicate deposits on the shell and the eggs do not keep well.

Do not wash the eggs before packing. One gallon of the solution is sufficient for 50 dozen of eggs if they are properly packed, so you see this is a very cheap method.

Window Steam Preventer

Green Castile Soap, cut small.....½ oz.
Alcohol (kind called Columbian Spirits is best).....4 ozs
Glycerine.....1 oz.
Water.....2 pts.

Dissolve the soap in the water, hot, let it stand for a day, shaking often

Then filter through paper and to the clear solution add the others.

Directions: Wet a chamois leather with the soultion and rub over the window, taking care not to smear. Do not let the windows dry. Six ounce bottles sell for twenty-five cents.

Preserving All Kinds of Fruit

This formula has been sold all over the country for $10.00, though perhaps $10.00 is a big price for it. Those who have used the process claim that it is alright and that you can can fruit without any cooking or the use of sugar.

Take:

Sulphur.....8 ozs.
Pulverized Saltpeter..... 1 oz.
Pulverized Licorice Root.....1 oz.

Mix all thoroughly. The cost will be small. This is your preserving powder.

Peel and slice your apples. You will need several plates and cups and a six gallon jar. Set a cup on a plate, pile apples on a plate about one and one-half inches deep and let the whole in the bottom of your jar. Fix another plate like the first and set it on the cup in the jar, and continue until the last plate reaches nearly the top of the jar. On the top of the last plate, set the tin cover of a baking powder can, and in this plate a round tablespoonful of your powder. Take a red-hot coal from the fire and lay it on the powder, which will begin to burn. Cover the jar closely with a board to keep in the gas, as that is what preserves the fruit. Let stand an hour then pack the apples in glass jars, pushing them in tight, and screw on the covers. Do not expect the powder to be all burned, for as soon as the jar becomes full of gas it stops burning. Be sure and have a nice red coal and the powder will do the rest, provided the jar is covered well. When wanted for use spread the apples on a platter for an hour before cooking, and every bit of the sulphur will leave them. All kinds of fruit can be canned in the same way. A large can or tight box can be used for canning on larger scale. This is said to be perfectly harmless and very sour apples or fruit require much less sugar when so canned, as the gas neutralizes the acid in sour grapes, apples, etc., so less sugar is needed when cooked.

New French Drink

The following is a recipe given for its preparation by one of the leading manufacturers of Bordeaux, France:

100 lbs. Dried Apples.
100 lbs. Raisins.
100 gals. Water.

Can use smaller quantities but use the same ratio. Put in open cask and let stand for three days; bottle with a half teaspoonful of sugar and a bit of cinnamon for each bottle. Vary the flavor to suit the taste. The dried apples are the lowest grade and the raisins are also the cheapest. If put up in kegs use a preservative as given elsewhere.

Rat, Mouse and Roach Exterminator

One pint alcohol, ¼ ounce cayenne pepper, 1 ounce powdered anise seed, ¼ ounce saltpetre, ¼ ounce white lead, 4 ounces essence of hops. Steam this slowly for an hour, then add 30 drops Quassia. Let stand 48 hours, and add one gallon of water; bottle for use. To use, saturate bread, meat, etc., and lay it in their frequented places. In two nights not one will be seen.

HORSE DEPARTMENT

Wounds and Cuts

Take four ounces Lard; Beeswax, four ounces; Resin, three ounces; Vaseline, four to six ounces. Melt these together and add Carbolic Acid, half ounce. *This is excellent.*

Colic

Gum Camphor, one ounce; Cayenne, one ounce; Gum Myrrh, one ounce; Powdered Gum Quaial, one ounce; Sassafras

Bark, one ounce; Spirits of Turpentine, one ounce; Oil of Origanum, one-quarter ounce; Oil Hemlock, half ounce; Pulverized Opium, half ounce; Good Alcohol, two quarts. Mix and let stand ten or twelve days, and filter. Dose, from one to four teaspoonsful in pint of milk. Keep this on hand. It is the best colic cure known.

Best Condition Powders

Fenugreek. cream of tartar, gentian, sulphur, saltpetre, resin, black antimony and ginger, each 2 ounces, cayenne pepper, 1 ounce. Pulverize and mix thoroughly. Dose, two teaspoonsful once a day in feed.

Cotracted Hoof and Sore Feet

Take equal parts of soft, fat yellow wax, linseed oil, venice turpentine, and norway tar; first melt the wax, then add the others, mixing thoroughly. Apply to the edge of the hair once a day.

Cure for Sweeney

Alcohol and spirits of turpentine of each 8 ounces, camphor gum, pulverized, cantharides and capsicum, each 1 ounce; oil of spike 3 ounces. Mix both with hot iron.

Farcy and Glanders

Iodide of Potassium 1¼ drams, copperas 2½ dram, ginger 1 dram, gentian 2 drams, powdered gum arabic and syrup to form a ball; or take ½ ounce sulphate soda, 5 grains powdered cantharides. Mix, and give at night in cut feed for several weeks, give at same time every morning and noon 3 drams powdered gentian, 2 drams powdered blue vitrol, give the medicines for a long time; feed well.

Great Arabian Heave Remedy

Give your horse a teaspoonful of lobelia once a day for a week and then once a week and you will hardly know he ever had the heaves. Try it.

Mange

Oil tar 1 ounce, lac sulphur 1½ ounces, whale oil 2 ounces. Mix, rub a little on the skin wherever the disease appears, and continue daily for a week, then wash off with castile soap and warm water.

For Bone Spavin

Hog's lard, ½ pint, best oil origanum 1½ ounces, oil cajeput 2 ounces, pulverized cantharides ½ onuce. Mix, and apply each morning for four mornings, heating it in with hot iron each time, then discontinue its use for three days, after which use as before for five mornings. Wait about 8 or 10 days and if not gone repeat as before.

Preserving Eggs

You will find a good many fakirs in selling egg formulas and you had better pass them all up. A firm located at New Concord, Ohio, have been doing a land office business for a number of years in the egg formula line. They would send you the formula for 50 cents and give you five directions how to proceed to make the solution, but the formula called for "Hyper Samphire" which could be procured only through them for $2.50 per box of 4 ounces or $10.00 per pound. The name was finely changed to "*Algetta Borocylic*," and a branch was located in California. A recent analysis of the compound proved to be nothing more or less than salicylic acid, which is worth but a few cents per pound.

Below we give a formula and directions for putting up eggs which you may try on a small scale. The originator of this formula is clearing up the year round over

$5,000 Per Year

and it is claimed it will keep eggs to perfection, and as the expense is nothing to try it, why not give it a thorough trial? It pays to buy eggs when they are cheap in the spring and summer and then put them up for winter use. To preserve eggs for one year take

Common Baking Soda .....1 lb.
Pow. Borax.....2 lbs.
Mix thoroughly.

Put up in 4 ounces boxes and sell for $1.00.

Directions for preserving eggs are—take one-half pound of unslacked lime, slack it with a little water, when completely slacked and in a fine, white powder, put it into two gallons of cold water; add half pound of table salt and stir well at frequent intervals, for about a day, then let it settle and draw the clear liquid. Add to this clear, prepared liquid one full tablespoonful of the above mixture, first dissolved in about a pint of boiling water. This will preserve 10 dozen of eggs, and the actual cost, next to nothing. When the eggs are taken out for sale, first dry them, and then brush on *whiting*, and you will be able to fool an egg expert, regarding the freshness of the eggs. This solution can be put in a jar, barrel, tub or any clean vessel, and the eggs put in a few at a time. Put in no more eggs than the liquid will cover. The eggs must be kept covered with the liquid, all the time. This can be accomplished by putting a cloth over the eggs and laying a board on the cloth, with some stone or weight to keep the eggs under the solution. Leave the eggs in the solution until you are ready to sell them, and then take out and pack as you would fresh eggs. IMPORTANT—Be careful to put only fresh eggs in the liquid.

Formulas For Barbers

Some of the following formulas have sold all the way from **$10.00 to $25.00,** and as it pays every barber to make up his own preparations, these will prove valuable to him:

Toilet Cream

Almond Oil.....1 pound
Riolet Pomade..... 6 ozs.
Oose Pomade.....6 ozs.
Vil of Bergamot..... 1 dram
Mix.

L. of C.

Cold Cream

Rose Water..... 8 ozs.
Oil of Sweet Almonds ..... 8 ozs.
Spermaceti..... 6 drams
White Wax .....4 drams
Pulverized Borax.....20 grains
Otto of Roses.....8 drops
Mix.

Glycerine Lotion

Glycerine..... 6 ozs.
Quince Seed.....1 dram
Hot Water.....21 ozs.
Alcohol..... 5 ozs.
Mix.

Sea Foam

Sulphuric Ether.....1 oz.
Alcohol.....1 oz.
Glycerine..... 1 oz.
Aqua Ammonia..... .....1 dram
Castile Soap, Sliced..... .....2 ozs.
Rain Water.....2 pints
Mix.

Sea Foam

Dissolve in one quart soft boiling water one cake cocoanut oil soap (shaved fine) and 1½ oz. borax; when cold add one tablespoonful aqua ammonia and perfume to suit.

Shampoo Paste

Dissolve in as little soft boiling water a possible one cake cocoanut oil soap a two cakes of shaving soap (shaved fin) one oz. borax and one oz. aqua amm a; when all is dissolved remove from sto and beat until cold and until comes to p per consistency.

Essence of Bay

Oil of Bay Leaves..... .....1 oz.
Colonge Spirit..... ....16 ozs.
Carbonate of Magnesia..... 2 ozs.
Water..... .....16 ozs.
Mix. Alcohol may be used instead of Colonge Spirits, but not quite so good.

Mouth Wash

Tincture of Orris.....4 ozs.
Alcohol.....4 ozs.
Rose Water.....4 ozs.
Otto of Almonds.. .....3 drops
Mix.

Glycerine Cream

Spermaceti.....45 parts
Paraffine.....35 parts
Almond Oil.....175 parts
Rose Water.....70 parts
Glycerine.....70 parts
Essential oil to perfume.....1 part

Mix and melt together the spermaceti, paraffine and oil; mix the glycerine and rose water and add to the melted a little at a time, under constant stirring. Remove from the fire, let cool down slightly, add the perfume and stir till cold.

Jelly of Roses

1

French gelatin.....4 drs.
Water.....5 ozs.
Glycerite borax.....10 ozs.
Rose water.....6 ozs.

Soak the gelatin in the water over night and then heat on a water bath until dissolved. Add the glycerite and the rose water, previously mixed with a fluid dram of albumin (white of egg). Heat until the albumin coagulates, and filter while hot through a cotton bag.

2

Gelatin.....1 oz.
Water.....24 ozs.
Glycerin.....12 ozs.
Oil rose.....10 min.
Thymol.....2 grs.
Alcohol.....1 dr.

Prepare as above.

Chestnut Hair Dye

Permangate of Potash.....1 dram
Powdered Gum Arabic.....2 drams
Rose Water.....3 ozs.

Mix. Apply carefully with a tooth brush so as to avoid staining the skin.

Black Hair Dye

1

Pyrogallic Acid.....1 dram
Distilled Water.....5 ozs.
Alcohol.....½ oz.

Mix.

2

Nitrate of Silver, (crystals).....1 dram
Distilled Water.....6 drams
Aqua. Ammonia.....2 drams
Or q. s. to make clear.

Apply the mordant first; as soon as it is dry use No. 2.

Black Hair Dye

Pyrogallic Acid.....¼ oz.
Distilled Water (hot).....1½ ozs.
Dissolve, and when cool add: Rectified Spirits, ½ oz.

Dilute the mixture when using with twice its quantity of soft water and add a little rectified spirits; apply with a soft brush. *This stains, but by repeated applications the effect is gained that is desired.*

Bay Rum

Oil of Bay.....6 fluid drams
Oil of Pimento.....1 fluid dram
Acetic Ether.....1 oz.
White Castile Soap, powdered..4 drams
Alcohol.....12 pints
Water.....10 pints

Mix and allow to stand one week and filter.

Hair Tonic

Quinine Sulphate.....½ dram
Acid Sulphuric Aro.....¼ dram
Tinct. Cantharides.....1 oz.
Tinct. Myrrh.....1 oz.
Castor Oil.....½ oz.
Alcohol.....7½ ozs.

Mix.

Preparation for Removing Stains

Sulphuret Potash.....½ dram
Distilled Water.....1 oz.

Mix.

Premature Baldness

The best treatment is to apply ointment No. 1 once daily, after washing the parts in soft soap and warm water for a week, and then use ointment No. 2 for three weeks or a month. If this is not successful, repeat the same course.

1

Resorcin.....½ to 1 dr.
Vaselin.....2 drs.
Lanolin.....2 drs.
Zinc Oxide.....2 drs.
Starch Powder.....2 drs.

2

Pilocarpine Hydrochlorate.....20 grs.
Distilled Water.....2 drs.

Mix and add:

Heavy Petroleum Oil..... 6 drs.
Bergamot Oil.....½ dr.
Verbenia Oil.....½ dr.
Make a pomade.

The Best Shampoo

The following will give you good satisfaction, and with but little expense and easy to put up:

Tincture Green Soap ..... 1 pt.
Potassium Carbonate..... 1 oz.
Water, enough to make..... 1 gal.
Perfume, a sufficient quantity.

Face Cream

Quince Seed..... .....2½ drs.
Boracic Acid, C. P..... 15 grs.
Glycerine..... 1 oz.
Alcohol..... 3 ozs.
Aq. Rosae.....add 16 ozs.
Perfume, q. s.
Color, q. s.

Mouth Wash Containing Formaldehyde

Formaldehyde..... 1 dr.
Tincture Benzoin..... 3 drs.
Tincture Myrrh..... 1 dr.
Oil Peppermint.....3 m.
Oil Anise..... .... 2 m.
Oil Cassia... .....1 m.
Oil Cinnamon..... .... 15 m.
Cochineal.... ..... 2 grs.
Alcohol..... ..... 2 ozs.
Mix. A few drops to be used in water.

Sea Foam

The mistake made by most druggists, who start out to compound a "dry" shampoo of the nature of "sea foam," is in the directions of overloading the mixture with soap. The principal ingredients should be a volatile alkali. A "sea foam" is intended to be supplied in small quantities and the hair rubbed with the fingers until nearly dry, the last traces being removed by a wet towel. The liquid should be rather strong of ammonia, the spirit of ammonia being superior to water of ammonia. A satisfactory article may be produced as follows:

Spirit of Ammonia..... ....3 ozs.
Alcohol.....1 oz.
Vanillin..... 1 gr.
Rose Water.....12 ozs.

Try Some of the Following Formulas

1

Ammonium Carbonate.....120 grs.
Alcohol.....2 ozs.
Glycerine..... .....1 oz.
Rose Water to make.....16 ozs.

2

Green Soap..... 1 dr.
Oil of Lavender..... 1 dr.
Alcohol..... ..... 8 ozs.
Water..... .....3 ozs.

3

Potassium Carbonate.....2½ ozs.
Sarsafras Wood.....8 ozs.
Rose Water..... .....4 qts.
Orange Flower Water.....4 qts.
Alcohol ..... 1 qt.

This formula is by Askinson and he directs to macertate the ingredients for one month and then filter.

4

Borax.....½ oz.
Ammonium Carbonate.....1 dr.
Glycerine.....½ fl. oz.
Water.... .... 1 pint
Alcohol..... 14 fl. ozs.
Perfume, q. s.
Mix.

5

Ammonia Water ..... 4 dr.
Glycerine..... 1 oz.
Spirit of Soap..... 1 oz.
Alcohol..... 2 ozs.
Oil of Bergamot..... 20 gtt.
Water enough to make.....16 ozs.

$10 Formula for Sharpening Razors

Sometime ago the writer was in a barber shop, and while there a smooth talking young man dropped in and proceeded to sell a formula and right to use of same, of a composition to save time in honing razors. The article, in question, would save nine-tenths of the time in honing, and it was soon figured out how much the barber would be ahead in the deal. It would be useless to say the barber didn't buy, for he did. An analysis of the same proved to be simply muriatic acid and water, in the proportion of one part of muriatic to nineteen parts of water. The use of the solution brings up a keen edge and no doubt but will do

all that is claimed for it. Try it. The directions the young man gave was to let the razor blade remain in the solution for 30 minutes before honing and stropping.

Hair Restorer

Here is a correct formula of a well advertised hair restorer, upon which a fortune has been made:

Resorcin	3 drs.
Tincture Capsicum	1 oz.
Tincture Quilliaya	2 ozs.
Glycerine	4 drs.
Tincture Cantharides	6 drs.
Spirit Rosemary	3 ozs.
Rose Water enough to make a total of	16 ozs.

Prune Juice

We give you here a formula that is more than worth the price of several books, and that is a formula for PRUNE JUICE. This formula really belongs in the extract department. Pure Prune Juice of this quality sells at $2.50 to $3.00 per gallon in barrel lots; you can produce the same quality for 50 to 60 cents per gallon and know it to be absolutely pure. Prune Juice will improve the quality of your vanilla extract and will answer the purpose of *tincture of vanilla*, which sold for $7.00 to $8.00 per gallon. It will give a fine fruity flavor (bakers and manufacturers of cookies take notice,) which cannot be equalled in imparting fine fruity flavor to cakes and cookies. You can make the juice this way: Take 2 lbs. Black Turkish (or Santa Clara, California) prunes and stone them, (or use them without stoning, or you can stone them after they have been soaked in the liquor; before washing them in water and throwing them away) put on them 1 quart of alcohol and 3 quarts of water, let stand 10 days or longer. Don't boil. Don't crush, but strain off the liquor, then wash prunes with water, so as not to throw away any alcohol. Filter product if necessary. This will answer about the same purpose as tincture of vanilla, when used in connection with vanillin, coumarin, etc. You may use any amount of this in your extract, just to suit your taste, say 15, 20 or 30 per cent.

Miscellaneous Formulas

Poultry Tonic

The following is a formula for a poultry tonic which has been advertised very extensively over the country for the past few years, and the originator of it claims to have sold **20,000** of them at **$1.00** each.

Copperas	24 ozs.
Blue Vitriol	1 oz.
Cayenne Pepper	8 ozs.
Nitrate of Potassium	1 oz.
Venetian Red	16 ozs.

Laying hens, tablespoonful to 2 gallons of feed; sick hens, double the dose. Feed once or twice a day.

A $5.00 Vermin Remedy

The following has been sold all over the west for $5.00, and those who have tried the remedy pronounce it to be all O. K.

For skunks, coyotes and such, take a piece of brimstone the size of a walnut, split a dry stick and press the brimstone into the stick. Place the stick and brimstone in turpentine, use a small pail for the turpentine. Light the stick with a match and drop it into the den while blazing. After about three minutes, close up the hole with sod, and it is goodbye to vermin; but be careful and not choke the fire by pressing the sod too tight in the hole.

Grape Juice

A large amount of Grape Juice now on the market contains nothing more, according to a chemical analysis recently made, than sweet cider colored with a coal tar dye. Any of the supply houses furnish the coloring dye. Flavor and preserve with an antiseptic.

Orange Cider

The following formula for orange cider belongs in another part of the book. Some manufacturers use it, but you will

find it is not as good as given in the Cider department:

Citric Acid.....4 ozs.
Phosphoric Acid.....2 ozs.
Boric Acid.....1 dr.
Water and Syrup to make 1 gal.
Orange Extract q. s.
Orange Color q. s.

This quantity of boric acid may cause fermentation, and if it does it will have to be increased a trifle. If, however, boric acid is used in too large quantities it may prove injurious.

First-Class Carbolic Salve

White Beeswax.....2½ ozs.
Linseed Oil.....8 ozs.
Carbolic Acid.....3 drs.

Melt the oil and beeswax together and pour in the carbolic acid, and pack in wide mouth bottles or boxes.

Turpentine Salve

Take equal parts of sweet oil, white beeswax and turpentine and prepare same as above for Carbolic salve. This is very fine for burns, etc.

Photo Paste

Every office should make their own paste, as the cost is trifling when made according to the following formula:

Wheat Flour.....1 lb.
Water.....2 pints
Nitric Acid.....½ oz.
Boracic Acid.....40 grs.
Oil of Cloves.....20 mms.

Mix the flour, boracic acid and water, and strain; add the nitric acid, apply heat and stir until the mixture thickens; when nearly cold add the oil of cloves. *Try this.* It will keep sweet until used.

Grease Remover

A recent analysis of one of the many "grease removers" on the market turned out to be as follows:

Sulphuric Ether.....1 oz.
Benzine.....8 ozs.
Best Alcohol.....1 oz.
Essence of Lemon.....¾ dr.

It usually sells for 10c per ounce. Take a clean piece of flannel and wet with remover and sponge over the goods.

Hecktograph Composition

A good many firms are making money out of Hecktographs, and if you want a formula you will find the following a very good one: Take 3 ozs. gelatine, pour over enough water to cover it and let stand say, 12 hours or longer, and then pour off all the water not absorbed. Next you may heat 20 ozs. of glycerine, and while hot add the gelatine, which has been soaked, and stir until it has been dissolved. Add 60 drops oil of cloves and stir thoroughly. Get some tin trays, the size you desire and ¾ inch deep, and pour in and when it is set it is ready for use.

To make the hecktograph ink, 40 grs. of any water soluble aniline color in 1 oz. hot water, adding, say, 1 oz. of glycerine, and shaking.

French Reviver

If you want something good for polishing pianos, show cases, etc., in fact anything where a high polish is desired, try the following:

Cider Vinegar.....1 oz.
Gum Camphor.....½ oz.
Spirit of Hartshorn.....1 dr.
Butter of Antimony.....¼ oz.
Linseed Oil.....4 ozs.

The gum camphor should be dissolved in the oil by gentle heat, then add the others slowly and use considerable "shake." Below we give a formula for making a quick Jelly Powder, and as there is a great deal of it sold it may prove a good seller with you.

Jelly Powder

Powdered Sugar.....1 lb.
Powdered Gelatine.....4 ozs.
Powdered Tartaric Acid.....½ oz.
Oil of Lemon, say about.....¼ oz.

Mix well. Dissolve 4 ozs. of this composition in ¾ pint of boiling water. For orange flavor use ¼ oz. oil of orange; for raspberry, use 1 oz. of essence of raspberry; for strawberry, use 1 oz. essence of strawberry; for wild cherry use ¾ oz. of essence of wild cherry. Of course it will be necessary to use artificial colors

for these, which may be had from any of the supply dealers.

Custard Powder

The writer doesn't know whether this is a very good seller or not, though he occasionally runs across lady agents selling it. It ought to sell in the winter time when eggs are high. You may try this: Powdered arrow root, ½ lb.; corn flour, ½ lb.; powdered sugar, 4 ozs.; powdered tumeric, ¼ oz.; oil of bitter almonds, 15 drops; oil of nutmeg, say 13 drops.

Directions are to mix all the powders well by sieving and then add the oils and mix again. ¾ ounce of this boiled with a pint of milk will make a delicious custard or pudding.

Plate Glass Polish

In an Illinois town the writer ran across a man who was selling any amount of a plate glass polish and coining money. He said it was the very best thing on the market and gave the following formula for making it: Powdered Kaolin, 16 ozs.; Calcined Magnesia, 8 ozs.; Benzine, 2 quarts: strong liquid Ammonia, 2¼ pints. Mix the powders thoroughly and work into a paste with a little of the benzine, and then you may add rest of benzine aud ammonia. Shake. Apply with a piece of flannel and then wipe with a dry flannel.

White Liniment

For a white liniment try the following formula for toothache, headache, sprains, etc.:

Oil of Mustard.....½ oz.
Gum Camphor.....½ oz.
Oil Eucalyptus.....1 oz.
Alcohol, best.....1 pint

Directions: Apply to the parts affected. Instead of using grain alcohol, a good many formuals call for wood alcohol. Do not think any liniment should contain wood alcohol except when used for stock, as wood alcohol is a deadly poison and has been proven that the system will absorb enough in a liniment to do harm in the constant use of same.

Chicago Furniture Polish

The following formula will make this furniture polish and will give good satisfaction:

Raw Oil, say.....½ gallon
Butter Antimony.....¼ pint
Alcohol Shellac Varnish.....1 pint
Turpentine to make one gallon.

Directions: Apply with a rag and rub till dry and glossy.

Pile Ointment—good one

Tannic Acid.....20 grains
Ext. Strommonium.....12 grains
Bismuth Subnitrate.....60 grains
Lanolin.....½ oz.
Petrolatum.....½ oz.

Apply as needed.

Fire Extinguishing Powder

Fire Extinguishing Powder is a good seller and there are a number of firms who are getting rich out of this business. The powder and the liquid preparations are all right as far as they go.

The writer can point out one firm who is clearing up $20,000 a year through agents. Try this:

Common Salt.....96 lbs.
Sulphate of Soda.....24 lbs.
Siliciate of Soda.....24 lbs.
Baking Soda.....72 lbs.
Chloride of Calcium.....24 lbs.
Ground Rice.....12 lbs.

Ingredients must be all dry and in fine powder and mix thoroughly through sieve: preparations of this kind should always pass through the sieve at least three or four times so as to get evenly mixed through and through. Without the ground rice being in, the preparation would likely pack during wet and damp weather. This powder is sold mostly in long tin tubes, nicely painted or labeled, and are about fifteen inches long and one and one-half or two inches in diameter. So the powder may be thrown out evenly you should fix pieces of wire across to form a net work. The tube

sells readily at $1.00 to $3.00 each—the cost is but a few cents, especially when the tube is made out of cardboard.

Paint Remover

A very good one on the market is one pound of Paraffine dissolved in Benzol to make one gallon. Apply with a brush, let stand a minute or till the paint is soft and then remove the paint with a scraper.

A Good Salve

You will find the following to give good satisfaction:

Petrolatum	1 lb.
Pow. Camphor	½ oz.
Carbolic Acid	¼ oz.
Oil of Lavender	¼ oz.

Apply as needed.

Gloss Ink

If you want to make a gloss ink and if in a hurry you may add one-half ounce of Fluid Waterglass to three ounces of any colored ink and shake well.

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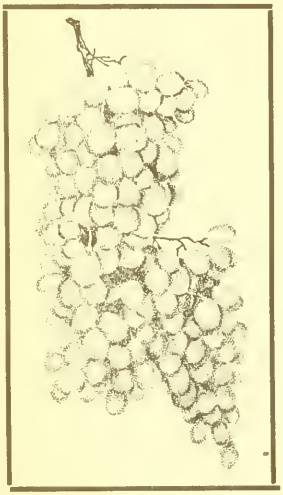

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Synopsis of the Principal Chapters:

Chapter I. Largely introductory. Shows the great possibilities of the mail-order business. How manufacturers can market their goods by this method, either by selling to retailers, smaller mail-order dealers, or direct to the public.

Chapter II. The standpoint of the small dealer. How to begin the business as a side-line, acquiring the necessary experience to go in deeper. Ready-print circulars and catalogs. How to keep records by the card index system. How to follow up inquiries, etc.

Chapter III. The catalog business. How the profit is made. The evolution of a mail-order customer. How a customer is secured. The kind of ads that pull. Amount of money to spend in advertising. How to place it advantageously, etc.

Chapter IV. The follow-up system. Examples of follow-up letters that bring a large percentage of orders.

Chapter V. The class of goods for the man with limited capital. How to grow from cheap goods into a more pretentious class of articles. Examples.

Chapter VI. Selling goods through agents. The right method. Price and profit. Examples of good ads and letters.

Chapter VII. "Hints by the Way." Practical experience of a concern that has succeeded where others failed. Three follow up letters that will prove excellent models for many mail-order dealers.

Chapter VIII. The mail-order medicine business. Inquiries, and how to turn them into orders. The value of testimonials, and how to get them. The price and the profit. The value of a new idea, etc. Examples of good ads and letters.

Chapter IX. Selling medicines through agents. How to get agents and how to keep them. The literature. Selling on consignment and making collections. Three strong letters to agents. This is a long chapter—the subject is fully covered.

Chapter X. Giving satisfaction. Promptness in filling orders. Slack methods and where they lead. The keystone of a successful mail business.

Chapter XI. Legitimate schemes. How to make a big profit and still give satisfaction. Samples of scheme circulars and follow-up letters. An example of a good scheme is given.

Chapter XII. The trust or consignment scheme is gone into fully. The author has had wide experience in this class of business and speaks with full knowledge. The best class of articles and premiums are shown in the light of practical experience. Where to buy at lowest prices. How to get replies at the lowest possible figure. Delinquent creditors. How to keep the percentages of losses down. Examples of dunning letters. Do not go into the trust scheme business without reading this chapter.

Chapter XIII. Advertising-mediums. Importance of buying the right class of circulation. Value of the different monthlies. How to place your ad in papers that will pull.

Chapter XIV. Typographical details. How space is measured. Display ads. Reading matter ads. A flat rate. Classified ads. Position. How to send copy, etc.

Chapter XV. Postal pointers. What you ought to do. Postal regulations and infractions.

Chapter XVI. The future growth of the mail-order business. This class of trade constantly increasing. The impetus given the mail trade by the extension of the Rural Free Delivery. The cumulative results of circular mailing. How to strengthen a good first impression so that an order follows. This chapter shows the way to "key" your ads effectively.

Chapter XVII. "Miscellaneous Schemes." Matrimonial bureaus and their operation. The right class of advertising literature. Courses in Hypnotism, and the immense profit realized. Palmistry, Astrology and Physical Culture are also given attention. How to start a successful book or subscription business by the mail-order method. The books that sell. Valuable pointers on guessing-contests and puzzle offers.

Chaper XVIII. Gives exhaustive consideration to the question of Financial Advertising. How to get mail orders for investment securities and speculative ventures on margin. Literature and methods. The best mediums to use. Brokers' advertising. The discretionary pool. Get-rich-quick schemes. Real estate advertising. Building and loan societies. Selling mining stocks. Follow-up letters, etc. Three model letters showing the right sort of arguments to use.

Chapter XIX. This chapter gives a plan for working up a very profitable business. Small capital is required. Where to get goods that will sell. A number of valuable points for every beginner in the mail-order business.

Chapter XX. Contains a number of letters of mail-order firms (names omitted) who were not succeeding as well as they should, or who had made absolute failures of the business. The reason for the lack of success.

The Appendix contains the names of manufacturers and jobbers who supply mail-order men with goods, supplies and circulars needed in their business. Full addresses are given.

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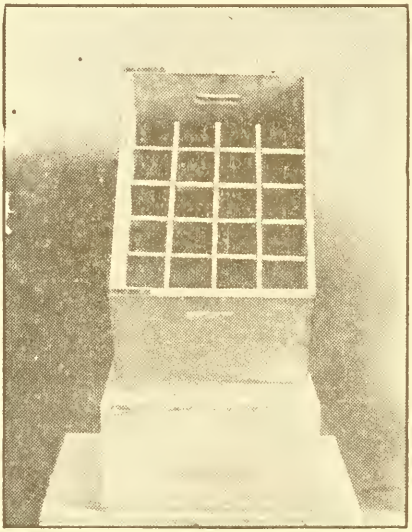

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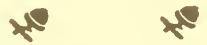

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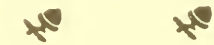

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